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ORIGINAL ARTICLES.

SOME NOTES AND SUGGESTIONS ON ASEPTIC AND ANTISEPTIC SURGERY OF THE PRESENT TIME.*

FRANKLIN STAPLES, M. D., WINONA, MINN.

I am persuaded that the discoveries, the improvements in methods and material, and the work that has been done in this department constitutes the most important advance in the surgery of modern times; and this, not only because by its means and methods we are able to do old operations more successfully and with quicker and better results, but because new fields have been opened and a great number of life-saving operations in abdominal, thoracic and brain surgery, which before could not have been safely attempted, have been rendered possible and practicable; and, of no less importance is the fact that our means of diagnosis have been greatly increased. It is in the memory of some present, when to operate with great rapidity was regarded as evidence of the greatest skill in operative surgery. The introduction and the use of anæsthetics and the better knowledge of anatomy and pathology in later times, has done much to do away with this opinion. Being able now to take time in our work, and by means of our aseptic and antiseptic methods, to guard against the evil results which would otherwise follow and which formerly did follow our operations we are able to make explorations into organs and cavities throughout the body that in pre-antiseptic times could not be safely done. Thus it is that our means of better diagnosis have

been greatly enlarged, and much that is new in pathology has come to our knowledge. The literature of this subject made within the last quarter of a century has come to be immense. It now has place in the standard works of this country and of the world, as well as in the medical and surgical periodicals of the day. The excellent practical work of Gerster, of New York, especially deserves attention and study.

Mr. Lister, of London, began to make known his work in 1865. W. Watson Cheyne, of London, whose article on "The Antiseptic Method of Treating Wounds," appears in the *International Encyclopædia of Surgery* by Ashurst, says, that for several years previously he (Lister) had been impressed with the great evils which resulted from the putrefaction of discharges in wounds, and, though he had in many ways succeeded in lessening the occurrence of putrefaction, yet it was not until after he had examined the results of Pasteur's researches on spontaneous generation and on the causes of putrefaction, that he was able to systematize his work.

Up to the time of Pasteur there seem to have been two opinions, especially among English pathologists, as to the causes of putrefaction or fermentation, so called, in the fluids on diseased and injured surfaces and in the tissues of the living body, viz.: first, that this process of change was due to the effect of the

*Read before the Southern Minnesota Medical Association, August 3, 1893.

gases of the atmosphere upon the organic fluids after their exit from the tissues and after they had lost their vitality; and second, that the changes of putrefaction were due to the spontaneous alteration in the fluids and tissues without the intervention of any extraneous cause. Various attempts were made, especially by French surgeons, to prevent or lessen the process of putrefaction and suppuration, and thereby secure a union in wounds by what was called "first intention," by mechanical means for excluding the gases of the air from the injured or affected parts. All these attempts were in a great measure failures, not being founded upon a true pathology. Most of us remember the days of plasters and salves and all kinds of lotions used in the dressings of wounds. Time went on and progress was made. A single quotation from the article of W. Watson Cheyne shows among other things, the beginnings of carbolic acid.

While these attempts to prevent putrefaction by excluding the "gases of the air" were being made, indeed before they had been thought of, it had been found that the addition of various substances to organic fluids, whether outside of the body or in wounds, had a marked effect in retarding or preventing fermentation, and notably in preventing smell. These substances, therefore, received the name of "antiseptics" substances which prevented putrefaction, or, literally, which acted against the causes of putrefaction. These had been in use for a long time, chiefly in the form of various balsams, ointments, and lotions. The most efficacious balsams contained various essential oils, which we now know to be powerful antiseptics; while the best lotions had, among other substances, alcohol as their chief component. The treatment of wounds with antiseptics had, however, been carried on in a very desultory manner and without any fixed guiding principle, until the publication in 1859, of a paper by Corne and Demeaux on a paste containing coal tar. By means of this paper, the attention of French surgeons was at once attracted to the whole question of the use of antiseptics in the treatment of wounds, and for a year or two very fertile results were obtained. Lemaire more especially took the matter up, and after experimenting with an

emulsion of coal tar with very good results, he at length found that carbolic acid was the chief constituent of coal tar, and accordingly introduced it into practice. During the same time various other antiseptics were brought forward, of which alcohol, in the practice of M. Nelaton, yielded the most important results. As a result of Lemaire's writings, the use of carbolic acid spread very rapidly on the continent, and even in Great Britain a few surgeons, Spence, Wood and others, employed it somewhat extensively. Carbolic acid as used in this way has however, many disadvantages, and hence many who had at first employed it largely gave it up almost entirely, and it seemed likely to fall into disuse, until it was again brought into notice by the writings of Lister."

We well remember the opposition that was made to what was called Listerism. It was in the comparatively early days of scientific study and work in bacteriology. It was then an easy thing for speakers and writers to sneer at the germ theory of disease, and to laugh at the means and methods of the germicide treatment. Even at the present time these objectors are unfortunately not all dead. It may not be counted to the credit of any professional man of science who, because there were imperfections in the early teachings and work in antiseptic surgery that further knowledge and experience had to correct, instead of doing honest and intelligent work in the way of clearing up the difficulties and finding the truth, did what he could to keep up the number of objectors and to retard scientific progress.

There are different classes of men who are always found on the back side of the wheel of progress. First: There are those who, by their mental and moral make-up, are naturally inclined to say no to whatever is first suggested or advocated by any one save themselves. Unfortunately there are, and always have been, men prominent in the profession who have manifested this spirit. Some seem ambitious to acquire distinction as wise critics and objectors. We have heard of men who were willing to commit murder and take the consequences for the sake of notoriety. Second: There are those who, even in surgery, are too busy even in their own way, or are too ignorant or indolent to keep abreast of the times. To be able to do and to do well in

any department of science, requires intelligent observation, hard work and self-sacrifice. Third: There is another class, somewhat related to the class just described, which seem to hold that, in order to succeed in a financial way in the practice of medicine and surgery, all expense must be reduced to the minimum. It is not the policy or practice to any great extent, to buy books, take journals, or buy instruments and surgical material, such as are now required for good work in surgery, gynecology or obstetrics. Practitioners of this class are not likely to make their influence felt in the literature of the profession, nor are they in the way of doing much in the work of educating the race.

The old idea that decomposition and putrefaction were due to the gases of the atmosphere alone, or to the spontaneous generation of disease germs and the development of the same in the tissues themselves, was shown to be incorrect by the observations and experiments of Mr. Tyndall especially, and to his observations is largely due the better knowledge and work of the present day. I have recently read Dr. H. Gradle's book on "The Germ Theory of Disease," written ten years ago, and have been greatly interested in his clear and concise presentation of the subject of the germ theory as it bears upon practical medicine and surgery of to-day. After describing Tyndall's methods of removing from a certain portion of confined air all particles of foreign substance found to be floating in it, Dr. Gradle says, "In the most elegant manner did Tyndall show that this optically pure air, identical with the surrounding air but deprived of its dust, could not produce decomposition. Test tubes had been let into the bottom of air-tight cases from which all floating dust had been removed, and were filled through a moveable pipette perforating a rubber diaphragm in the top of the case, the entrance of the pipette being protected by a packing of cotton. After filling the glasses with various putrescible substances and plugging the pipette, they were sterilized by five minutes' boiling. Though exposed to the air in the box, these organic solutions kept sweet indefinitely, while a second set of test tubes similarly treated, were teeming with life and most offensive in smell after a few days' exposure to the impure air of the laboratory. Are not these various experiments complete

proof of the role of atmospheric dust as a cause of putrefaction? Is there a link wanting in the chain of evidence that the air cannot by itself start decomposition, but that it contains floating particles, living dust, which on reaching the proper soil develop into the organisms whose life-work reveals itself in putrefaction." Our present practice of excluding, so far as possible, from our operating rooms and hospital wards all dust-making and dust-holding material, and of adopting such means as may prevent the diffusion of infecting germs from the bodies and clothing of operators, assistants and nurses, is based upon this doctrine, viz: that the germs of putrefaction in surgical injuries may be and are oftener than otherwise introduced in this way from without.

In these times of aseptic and antiseptic surgery we have learned many things, and are in the way to learn many more, and already we have had time to demonstrate the practical advantage of what we have learned. We have learned something of what the operating room should be, the advantage of the clean uncovered floor, the plain walls, the plain metal or polished wooden furniture, the plain dishes and trays for solutions and for holding instruments and material when in use. We have learned the use of hot water as a germicide. We have learned how much it means to take care of instruments and hands and the bodies and clothing of operators and attendants, in order that all may be entirely aseptic at the time of work. We have learned something about the necessary temperature in the operating room, especially when the great cavities are to be opened. We have learned what are the particular uses of the cat-gut, the silk worm gut, and silver wire, and how to make them and keep them aseptic. We have learned something about irrigating septic wounds, and of the various solutions for doing this work. We have learned something about carbolic acid, bichloride of mercury, iodoform, and other articles of like character. We have learned something of the dangers of impure sponges, and that there may be death on the hands and under the finger nails in obstetrical cases, in surgical gynecology and in laparotomies. We have learned to appreciate the services of a clean and faithful nurse, who keeps herself aseptic in body and clothing.

Dr. John A. Wyeth, of New York, in his recent excellent work on general surgery, devotes his first chapter to surgical dressings, ligatures, sutures, irrigating solutions, etc. This chapter, indeed the whole book, should be read by every practicing surgeon. I have here a few practical notes from the same.

Sutures and Ligatures.—Silk, cat-gut, silk-worm gut, and silver wire will meet every requirement in tying vessels and closing wounds. Silk is the invaluable suture material. The finest black iron dyed silk is needed in plastic surgery especially of the neck and face. Cat-gut should be kept in well closed jars made for the purpose, with the material completely covered with the pure oil of juniper. Ninety-five per cent. of alcohol is equally aseptic and is well adapted to the silk. Twisted silk is better than the braid.

Solutions.—For irrigating wounds, submerging instruments, and disinfecting in general, solutions of corrosive sublimate and carbolic acid are necessary, and pure alcohol, iodoform and chloride of zinc solutions may at times be used.

Koch has demonstrated that, as a germ killer, corrosive sublimate excels all known agents. The sublimate solutions vary in the proportion of one part of the bichloride to five hundred parts of distilled water by weight, or 1 to 500, 1 to 1,000, 1 to 2,000, 1 to 3,000 for use outside of the great cavities, and 1 to 8,000, 1 to 10,000, 1 to 15,000, and 1 to 20,000 within the cavities.

The sublimate solutions are only used for irrigation and for disinfecting the hands, sponges and gauze. All instruments are submerged in carbolic acid solutions or in alcohol.

The steam and carbolic spray, formerly used during an operation, has been abandoned for the purpose for which it was used, and is now only used to lay the dust or as an aid toward the more thorough cleansing of operating rooms and wards.

It is unnecessary for me to speak at length of the various kinds of material and apparatus now used in good antiseptic work. Surgeons have in daily use and understand the comparative value of iodoform, aristol, chloride of zinc, carbolized gauze, sublimate gauze, iodoform gauze, borated absorbent cotton, and the protectives of rubber tissue, oiled silk, and

Mackintosh rubber cloth. The making and the care of the different drainage materials come in as an important part of the work. The essential of aseptic surgery is absolute cleanliness. This means vastly more than most people are able to understand. It applies to the body of the patient and to all surroundings, the substance of which or the emanations from which, may come in contact with the parts under treatment. Dry heat and hot water are important means. While asepsis is the first essential, to secure this condition antiseptic means and materials, such as have been enumerated, are indispensable.

It is not alone in the greater operations that asepsis and antiseptics have been found of great importance. In general practice in minor surgery we are able to have results which a few years ago were thought to be impossible. In lacerated flesh wounds and crushed limbs and extremities, such as we have in railroad coupling accidents for instance, good practice is as follows: After carefully cleaning the lacerations throughout their extent and judiciously trimming and removing the parts of flesh and bone that have been actually destroyed, thoroughly irrigating, then bringing the torn and cut parts together with aseptic sutures if necessary, dusting any denuded surfaces and along the line of the sutures with the iodoform or aristol powder, enveloping the whole with antiseptic gauze and with the rubber protective and bandage, and taking care that absolute rest shall be had and a proper temperature maintained, we allow days before a redressing is done. At the end of from four to six days and sometimes more, upon removing the dressings, we are apt to find a kind of parboiled condition of the skin, no redness, no swelling, no inflammation, no suppuration. This experience is in contrast with what used to be, for parts are saved and rendered useful which formerly were sacrificed, and the chances of general septicaemia are greatly lessened.

Many practitioners who are compelled to do more or less surgery, generally in emergencies and frequently in the country under unfavorable circumstances, may be inclined to say that these teachings are all very well and that the principles of practice are probably correct, but to do work in the manner required is impossible ex-

cept in the well furnished operating rooms of modern hospitals, or at least in the cities where the means can be had and qualified nurses may be employed, and the practical conclusion is that it is useless to try. This is wrong. Let the surgeon thus situated make greater efforts to overcome, so far as possible, the difficulties with which he has to contend. Let him not fail to keep himself supplied with the best material required in first-class work and be diligent in learning how to take care of it and how to use it. Let his practice in the details of aseptic and antiseptic surgery not only enable him to secure good results, but be a means of education to the people with whom he has to do. In this connection and in closing I have a brief note or two from Gerster.

"Unremitting attention to, and a severe self-discipline in always carrying out the measures of strict cleanliness known to be necessary to uniform success in the management of wounds, will gradually become, however irksome in the beginning, a mere matter of accustomed routine. As the mind and senses learn to exercise vigilance without special effort, the surgeon's results will become more and more gratifying.

"It is a great mistake, paid for by the

loss of limbs and lives, to believe that the mastery of practical cleanliness, or asepticism, can be acquired without a clear comprehension of the principle, and without earnest and severe training in the handicraft of asepticism.

"The school of learning to employ the principles of asepticism is open to every general practitioner, in the treatment of many affections and injuries pertaining to minor surgery.

"Emergencies will necessarily involve varying modifications of the means, but never a deviation from the principle of asepticism.

"A hasty tracheotomy for the removal of a foreign body, a herniotomy to be done in the dead of the night amid the squalid surroundings of a tenement, or the first care of a common fracture or a gun-shot wound, will present special and varying difficulties, to be overcome only by good training, circumspection, and versatility. They can be overcome, as many examples in the experience of every successful surgeon testify."

In taking account of the present and rejoicing in the achievements of to-day, we should be glad to realize that we are in the way of progress which is still leading to a better and higher future.

COMMUNICATIONS.

BLOOD PRESSURE.*

WM. BAILEY, M. D., LOUISVILLE, KY.

Recently attention has been directed to heart therapy, and to the influence of those remedies having direct power over the heart and circulation. Believing that influences exerted for circulation should extend much beyond this central organ, important as it may be, I ask attention to blood pressure.

Two factors are essential to the production and maintenance of tension. First, and perhaps chiefly, it is dependent upon the power of the heart. Next upon the size of the arterioles and capillaries.

Pressure is increased by whatever gives additional power to the heart, and it is diminished by whatever lessens the heart power. Pressure is increased likewise by whatever diminishes the size of the arterioles and capillaries, and it is diminished by whatever increases the calibre of these vessels.

Pressure is highest when the heart acts with vigor at the same time the vessels are contracted. Pressure is lowest when we have diminished heart power with dilated vessels. The work accomplished by the heart is dependent upon the size of the blood vessels more largely than often we recognize.

* Abstract of essay read before the Medico-Chirurgical Society of Louisville, Ky., July, 1893.

The heart, under no circumstances, can send into the aorta and its distributing branches more blood than it receives from the veins. Paralyze the veins and keep an animal in the erect position and very little blood reaches the heart, and in consequence very little is sent into the arteries.

A blow upon the abdomen of a frog will greatly distend the veins thereof, and a great difference in the pulse will be observed by changing the position of the frog from the perpendicular to the horizontal. The same thing occurs in shock or when one suddenly withdraws a large amount of ascitic fluid or urine from a patient in the erect position. This observation teaches us to place in the horizontal position patients under these circumstances, and even to lower the head below the level in fainting.

Nutrition takes place while the blood is in transit through the arteries and capillaries and not after it has reached the veins; hence it is largely dependent upon the size of these vessels. Although a vital process, it depends upon the passage of nutrient material into the tissues through the vessel wall; after serving its purpose it is reabsorbed and passed on to the veins.

The forces concerned in securing the circulation of the blood are purely physical and obey well-known physical laws. We can gain valuable lessons as to the circulation of the blood by studying the circulation of water through the pipes and hose attached to our water mains. The height of the reservoir and the size of the delivery pipe determines the character of the flow.

It has been demonstrated that the veins are capable of holding more blood than an animal possesses; that the entire volume of blood of an animal may be introduced into the veins of another animal of the same size, without increasing tension, provided section of the medulla oblongata has previously been made. The influence of the vaso-motor centres is at least the equivalent of the ordinary volume of blood in maintaining blood tension. In other words, blood tension is better maintained under normal action of the vaso-motor system than it would be without it, even if twice the ordinary volume was furnished.

Tension in the arterial system depends upon the volume of blood sent into the aorta, the force with which it is pumped

and the more or less readiness with which it is allowed to make its exit through the capillaries into the veins.

To insure good work on the part of the heart it is necessary to have a healthy organ and an abundance of good blood at its disposal. Sufficient time should be allowed it for filling its cavities, and too much hindrance in its delivery not offered it. Time will not allow me to consider fully the nerve supply of this central organ. It is well-known that the heart depends upon the nerve forces governing it for the character of the work it will perform, and the especial purpose of this paper is to ask more earnest attention to blood tension as affecting the purposes it is endeavoring to accomplish. The character of the pulse should have closest scrutiny in order to facilitate the work to be done. It may be that we will thus find that the heart is fully able and abundantly willing to perform its duty, but is handicapped by difficulties placed in its way by the condition of the capillary circulation. It will be observed frequently that the heart is laboring vigorously and impatiently with over-distended cavities due directly to abnormal contraction of the capillaries, and rational medication requires us to lessen this tension rather than to further goad on a willing heart.

I admit that with our present imperfect knowledge some very difficult problems present themselves to us in the use of remedies for influencing the circulation of the blood, but we will not be aided in their solution by *blindly* using, as is the custom with some, such remedies, so potent for both good and evil, as digitalis.

Fallacies easily creep in when we begin to study the physiological action of drugs, but there are many earnest and competent workers in this department of medicine and the hope for the future is very bright. The greatest need of medicine to-day, is knowledge of the natural history of disease, and accurate knowledge of the physiological action of drugs. The day is passed for blind, haphazard prescription writing.

I shall not undertake to even mention the names of the drugs that might be considered in connection with this subject for my sole purpose is to suggest a line of thought for discussion but, as most apt, I would ask you to consider the physiological action of digitalis and of the nitrites.

STONE IN THE BLADDER WITH A REPORT OF CASES.*

FLOYD WILCOX McRAE, M. D., ATLANTA, GA.

In treating of this subject, I shall speak succinctly of the etiology, symptomatology and treatment of stone in the bladder, purposely avoiding extensive details and references to authorities.

The chief predisposing causes—defective digestion and assimilation due to improper diet, to a preponderance of solid over liquid ingesta, or to high living coupled with insufficient exercise and imperfect oxidation. Whatever the cause, there is always an excess of the solids of the urine. These, however, are only predisposing causes, and colloids as mucus, pus, etc., due to inflammatory conditions of the urinary mucous membrane, must be present before stone in the bladder will result. Constitutional vices, such as gout and rheumatism, and the allied condition lithæmia, are important causative factors. Enlarged prostate and stricture of the urethra, with the inflammatory changes resulting therefrom, act as immediate causative factors in a small proportion of cases. The extremes of life present the larger number of cases. Males are much more frequently affected than females. The children of the poor are more subject to vesical calculi than those of the wealthy, because improper and insufficient diet and insalubrious surroundings bring about that condition of the system most favorable to the development of stone, just as we have the same conditions resulting from excessive indulgence in rich food and alcoholic beverages, coupled with insufficient exercise in the other extreme of life in the wealthier classes.

The large majority of calculi are composed of either uric acid or phosphates. The former predominate in children, and the latter in the aged. Renal calculi, foreign bodies, etc., passing into the bladder, act as nuclei and grow by accretion of urinary salts. In not a few cases the development of stone in the bladder will have been preceded by the descent of a renal calculus with its concomitant symptoms. A history of nephritic colic not followed by the expulsion of the gravel

through the urethra, would naturally lead us to suspect the formation of stone in the bladder when there is subsequent irritation of that viscus.

Frequent urination, worse during the day than at night, increased by exercise, is one of the earliest symptoms. This is, in the majority of cases, accompanied by pain of a gnawing, burning character referable to the end of the penis, and which is relieved by pulling the prepuce or pressing the glans. Children thus not infrequently acquire the habit of masturbation. Boys with stone in the bladder very frequently present elongated and irritated prepuces, brought about by constant traction for the relief of the pain. Sudden stoppage of the stream during micturition—due to a small calculus having engaged in the neck of the bladder—is another of the earlier and more important symptoms. This condition is frequently relieved by change of position, so that the victim of stone in the bladder soon learns in what position the urine may be passed with the least pain and voids the urine in that position. Hæmaturia is also a symptom of some importance, especially if only present at the end of micturition and accompanied by other symptoms. Reflex pains, especially persistent podalgia, are often significant symptoms. Priapism, mucus in the urine, etc., are of minor importance.

None of the symptoms thus far enumerated are pathognomonic of stone in the bladder. Only when the stone can be felt by the searcher and the characteristic click elicited are we sure of the presence of a calculus in the bladder. Even then there are possible sources of error, such as the presence of incrustations and indurated growths. Nor is the failure to find the stone with a searcher proof that one does not exist. There are several sources of error here also, viz; a small stone behind an enlarged prostate, encysted stone, or stone contained in a diverticulum. Thus it is clearly seen that in a certain small proportion of cases, the surgeon finds it difficult to know just how to proceed. Whether it is better to operate in the face of a probable failure to find a stone, or to let the

*Read before the Georgia State Medical Association, May, 1893.

patient suffer till the suffering becomes unbearable, or a positive diagnosis may be made, is a question by which the surgeon is sometimes confronted. Where, however, the discomfort is great it seems to me it is better to operate, for usually when a stone is not found other conditions obtain that are susceptible of operative relief.

In one of the cases which I shall report further on, the symptoms were characteristic of stone in the bladder, although no stone was found. The operation, however, was a brilliant success in relieving the patient of a most violent cystitis of long standing.

In stone in the bladder, just as in most other diseased conditions, each case is a law unto itself, and must be treated on general surgical principles. The operator who wisely determines as to the best method of procedure in each individual case, other things being equal, will get the best results. Of first importance is the prophylactic treatment, i. e., the treatment of lithæmia in its various manifestations including renal calculi. Also the treatment of those obstructive and inflammatory conditions which are such important factors. As already stated, in the formation of stone I have only mentioned the prophylactic treatment, with no intention of entering upon the consideration of this interesting and important part of the subject. I have intended in this paper to discuss only the surgical treatment of stone in the bladder. Of all the methods of treating stone in the bladder none has so wide a range of applicability and so low a death rate as litholapaxy (Bigelow's operation). I have, however, had no personal experience with it, as the cases thus far presenting themselves to me were such as seemed to me were more amenable to other procedures. This operation offers much the best results except in very young children, very large or very hard stones, or where there is co-existing tight organic stricture, or enlarged prostate of such character as to prevent the introduction of the lithotrite, or where there is a violent cystitis due to the presence of a stone. For large stones associated with prostatic or vesical tumors, the high operation is undoubtedly far superior to any perineal operation. Small stones associated with stricture of the deep urethra or violent cystitis are best treated by the median operation. Nor is the lateral operation to be entirely

set aside for the now more popular operations of litholapaxy and supra-pubic lithotomy. Each of these operations has its proper field of usefulness, and it is only by a careful selection of the methods of treatment that the best results are to be obtained.

CASE I. Mr. F., æt. 72 years. Fat, fleshy, very flabby; weight about 200 lbs. History of bladder trouble extending over a period of five years, during which time had had two attacks of left hemiplegia. Marked cystitis existed, for which various internal and vesical injections had been used with little effect. Large quantity of pus and mucus in urine associated with blood, the latter being greatly increased by exercise. Constant felling of weight in bladder and occasional violent pains, spasmodic in character, and aggravated by locomotion. No relief from treatment. Sounding bladder failed to demonstrate the presence of stone. Operation undertaken at the urgent and frequent solicitation of patient and friends. Supra-pubic cystotomy decided upon. Operation August, 1890, assisted by Drs. V. O. Hardon and L. P. Kennedy; chloroform anæsthesia. Large phosphatic calculus (weight about 800 grs.) removed. Operation completed in usual way. Patient's condition excellent; rallied promptly from anæsthesia; no vomiting. Drainage excellent. No unfavorable symptoms until morning of 5th day, when deep coma suddenly supervened, and death resulted a few hours later. Temperature never rose above 101° F. No post-mortem. Wound in very healthy condition. Death probably due to cerebral hemorrhage.

CASE II. S. M., æt. 2 years. Well nourished. History of "gravel." One small gravel removed by attending physician from fossa navicularis, a few weeks prior to operation. Retention of urine.

Operation May, 1891, assisted by Drs. L. P. Stephens, L. P. Kennedy, L. B. Grandy, and C. C. Johnson. Chloroform anæsthesia. Meatus enlarged and five small phosphatic calculi removed from anterior urethra. Sound arrested by calculus impacted in prostatic urethra. Decided upon left lateral operation, which was immediately done. Large quantity of phosphatic debris removed from bladder. No well formed calculi—so soft that they were crushed as soon as grasped by forceps. Bladder thoroughly irrigated. Sub-

sequent history uneventful. Recovery perfect. No return of trouble.

CASE III. Negro, æt. 61; blacksmith; weight 190 lbs. General condition good. Characteristic history of stone in the bladder. Operation Dalton, Ga., November, 1891, assisted by Drs. Gordon, Bivins, and McAfee of Dalton, and Warren of Atlanta. Left lateral operation; difficult on account of depth of perineum. Medium sized phosphatic stone removed entire. Weight 300 grs. Recovery excellent. No recurrence. Time of operation including sounding and dressing, 20 minutes. Enlarged prostate freely incised to make sufficient opening to allow removal of stone.

CASE IV. J. D., æt. 28, St. Augustine, Fla. Vigorous. History of bladder trouble for over six months. Subjective symptoms characteristic of stone; urine full of pus and mucus. Sounding failed

to elicit characteristic click, though slight grating was distinctly felt. Operation, Atlanta Medical College, February 13, 1892. Median operation. Large quantity of pus and phosphatic debris removed; bladder irrigated. No stone. Perineal drainage for ten days. Bladder irrigated twice daily with hot boric acid solution, or Thiersch's solution. Recovery perfect.

In the cases reported, I have simply stated, in the most concise manner, the histories of the cases and the results of the operation. Case I. was a forlorn hope. The probability of a good result was so remote that I should not have operated, notwithstanding the importuning of the patient and his friends. In cases II, III and IV the results were very gratifying indeed. All made excellent recoveries, are still living, and the relief afforded by the operations seems to have been complete and permanent.

SOCIETY REPORTS.

THE LOUISVILLE CLINICAL SOCIETY.

Stated Meeting, May 16, 1893.

THE PRESIDENT, DR. I. N. BLOOM, in the Chair.

DISCHARGE OF PUS AT THE NAVEL FOLLOWING AN ATTACK OF TYPHOID FEVER.

DR. A. M. VANCE: I saw a few days ago a little girl nine years of age, with the history that thirteen weeks ago she was taken with typhoid fever; according to Dr. Rudell who is the family physician, this disease ran a typical course up to seven weeks when the umbilicus became tender, not very red but pouted a little, and about two weeks afterward a small opening occurred and a great deal of pus was discharged. The doctor treated it expectantly for four or five weeks, up to the time I saw the patient last Friday. I advised exploration and more thorough drainage. The child was in an extreme condition, having emaciated almost to the last degree, was suffering with hectic fever and was in a very forlorn condition in every way. I was afraid to give chloroform but had to do so to perform an abdominal sec-

tion. An incision was rapidly made in the median line using the umbilicus for the center, and a great quantity of pus was evacuated along with solid material which I thought at the time might be fecal matter. The pus was very fecal in odor. I found the abdominal wall from the ribs to the ilium had entirely separated from the parietal peritoneum and this surface was suppurating from the opening back to the kidney region on either side. I passed my hand around on each side to discover, if possible, the source of this abscess, but could not find any perforation. The whole area was thoroughly washed out and stuffed with strips of iodoform gauze on each side. Since then the child has been very much better, eating constantly, calling for food, sleeping well, and has been very much more comfortable. To-day I found that the gauze would not drain well toward the umbilicus and I made counter openings as far around as I could reach with a probe and put in two large rubber drainage tubes to either side

from the umbilicus. Drainage has been perfect since. I believe the trouble was due to a perforation of the intestine at a point where there was an adhesion to the parietal peritoneum and the pus seeking a point where there was the least resistance, finally discharging at the navel, where there possibly was a little hernial weakening.

I have never seen a case just like it; it is something new in my experience and I thought a report of it might be of interest to some of the fellows. I am convinced that there was a fecal opening somewhere, probably in the right iliac region.

DISCUSSION.

DR. J. G. CECIL: Dr. Vance's remarks recall to my mind a case of typhoid fever in a colored woman in the City Hospital, that had a perforation of the gut; but it was never diagnosed, nor suspected until after death and the post mortem revealed the true state of affairs. In that case we found evidences of general peritonitis but more particularly in the region of the cæcum and small intestine; wherever we found Peyer's glands there was localized peritonitis, with an accumulation of fecal matter, pus, etc. of a very offensive character. I was particularly interested at that time to know that a case of typhoid fever might suffer a perforation and yet not give any of the classic signs, sufficient at least to lead to a diagnosis. I am sorry that I cannot recall more correctly the exact facts in the case. The patient lived probably several days after the time we supposed this perforation took place. Of course not knowing that there was a perforation we could not ascertain to a certainty when it did occur but, after recalling the history of the case, it being substantiated at the post mortem, we thought probably it occurred several days before death.

The case related by Dr. Vance seems to me to be a very extreme one; he suggested the other day in private conversation that it must have been due to a perforation, and from the history of the case I do not see how there can be any other rational explanation of it.

ABDOMINAL PAIN FOLLOWING TYPHOID FEVER.

DR. J. M. MATHEWS: A young lady consulted me to-day with the following his-

tory: She is about twenty-one years of age and had an attack of typhoid fever eight months ago in the city of New York. She said that the attack was accompanied with several very distinct and large hemorrhages from the bowels; that after she made a recovery she felt a pain which was aggravated upon exercise—going up stairs or anything of that kind—continually; that she was forced to use even now an abdominal supporter; that she consulted her physician who was an eminent physician in New York, and he told her that with this history of typhoid fever accompanied with hemorrhages and with this pain that she evidently had extensive adhesions and warned her that should she have an acute attack at any time, to immediately consult a surgeon, because an operation would be necessary. The reason she consulted me was that she states if she goes one day without an evacuation this pain is set up with great intensity and she has to at once open her bowels with an aperient.

On questioning, and with a partial examination of the case, I found that she referred the pain nearly directly to the McBurney point and she gives the history of having had several distinct attacks of pain, which would indicate more or less appendicitis, and I was inclined to think, or, at least the question arose in my mind, whether or not it was not separate and distinct from her attack of typhoid fever, in other words outside of Peyer's patches; whether or not the appendix was involved, having no connection with the attack of typhoid fever. She is impressed that she will possibly need a surgical operation as she has been warned that this might be the case.

DISCUSSION.

DR. WM. BAILEY: Basing the idea of perforation upon fecal odor: Is it not possible, owing to the thinness of these structures, to have a fecal odor without perforation?

DR. A. M. VANCE: Yes, I think this is quite possible, and may have been the cause of the fecal odor in the case I reported, but there was considerable material looking like fecal matter in the right iliac fossa. There is one point I failed to mention in the history: I gave the child a purgative the day after the operation and she had several large evacuations, and my attention was called to the peculiar

character of them, looking like they were filled with thousands of little bodies; the whole mass seemed to be filled with little worms. I could not make out what it was at first, but finally came to the conclusion that it was the little fibres of banana that go from the center to the periphery of the banana. The child had eaten a great quantity of bananas even the day before the operation.

CONTINUED REPORT—INTUBATION FOR
PAPILLOMA OF LARYNX.

DR. WM. CHEATHAM: I want to make a continued report of a case of intubation; a child about three and a half years old which I had to tube for papilloma of the larynx, making pressure and thus hoping to produce absorption. The child has worn the tube since September last, having been changed three times in the meantime. The father telephoned me the other day that the child had coughed the tube out, and I asked him to bring the child to my office. He did so and gave me the history that the child dropped in the back yard as if in shock, and the mother found the tube partially out and pushed it back; I found the tube in position, but turned half around. Could not get it out with the extractors. I had to milk it out by putting my right fore finger in his mouth and placing left thumb below tube on larynx by firm pressure up and back. I finally succeeded in getting it out. This was last Monday and the child has not had to have the tube inserted since and the breathing has been perfect without it. It is marvelous how these little ones get used to the tube. In removing this tube I did not have to use a gag to hold the mouth open. He held his mouth open each time and allowed me to use the extractor without any trouble.

I have two cases on hand now of paralysis of the left recurrent laryngeal. One of them interested me a great deal in which there was at first paralysis of the recurrent laryngeal, which supplies the abductor and adductor and the arytenoid muscle. Some gentleman has taken this nerve and dissected the three fibres, showing them separately. This case had adductor paralysis at first, the cord being firmly contracted and drawn over to the left. He did not know what was the cause at first but later it has been found

that he has an aneurism of the aorta. His voice was exceedingly bad, he was very hoarse, as is usually the case with adductor paralysis. In the last few days he has improved very much. Upon examination I found complete paralysis of the left vocal cord; it having taken the cadaveric position, the right cord now does not have to go over so far.

In the other case of paralysis of the left recurrent I have not yet been able to make out any cause. I have also a young lady with paralysis of the arytenoid muscle, with loss of voice six months. I do not know whether it is a case of hysteria or not. She has menstrual trouble. I have not been able to find any local cause for the paralysis.

MILK SUPPLY OF LOUISVILLE.

DR. J. M. MATHEWS: I thought this evening would be an opportune time for a discussion upon the question of the milk supply of Louisville in connection with the epidemic of typhoid fever. There are two or three points that I would like to have the members consider.

First: Whether or not it is a recognized fact that water and milk are agents or vehicles for communicating the germ that produces typhoid fever.

Second: Whether there is a specific germ causing this disease, and if not how much do we know about the cause of typhoid fever in this connection?

Third: Recognizing that there has been an epidemic of typhoid fever in this city, whether or not the circumstances surrounding this epidemic and the investigation made by the State Board of Health was warranted.

Fourth: How should an examination of this kind be conducted?

We must all recognize that there has been and is now an epidemic of typhoid fever, as I say, in the city of Louisville. In one certain district, as Dr. Bailey will tell you, there are upwards of forty-five cases suffering from the disease who are or have been taking milk from one certain dairyman. I would like to hear an expression from the general practitioner and bacteriologists as to whether there is a suspicion correctly founded or not, and if so should it not have been investigated in the manner that it has? The reason that I have presented this question to-night is

simply this: That the daily secular press of Louisville in its energetic, not to say sensational way, has brought the subject so prominently before the profession and the people that some impression should be made upon them that is scientific and correct. We know how easily the laity are led away by articles in the daily press and we also recognize the fact that if they are led away in the wrong direction, that it is possible it might create a great deal of harm. Not being a bacteriologist myself, nor a general practitioner of medicine, I leave it to the members of the Society to discuss this question. I would like to hear from Drs. Bailey and Vissman as to the proceedings up to date, be-

cause I find the profession of Louisville are greatly interested in this matter. We must, as physicians, be given credit for trying to take money out of our pockets; recognizing as we do the cause of typhoid fever, we go to work trying to prevent the cause, yet the press are disposed to make light of us sometimes in our effort to prevent the disease.

DR. WM. BAILEY: I would like to say that I have no further report to make, as I have not pursued any further investigations since my report to the State Board of Health, which you were kind enough to adopt in the minutes of the last meeting in lieu of the remarks I made at that time.

LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, June 9th, 1893.

THE PRESIDENT, Dr. T. L. McDermott, in the Chair.

SYPHILIS IGNORANS.

DR. A. M. VANCE: I first saw this gentleman two years ago, at which time he had a suppurating condition of the left elbow joint following incision of the joint by Dr. Sloan, of New Albany, Ind.; the patient also had a number of suppurating points about the body, one in each armpit and I think one upon the thigh. He was considerably more run down generally at that time than he is now, and I took it to be a case of syphilis ignorans, he not knowing of having any primary lesion. I put him upon anti-syphilitic treatment which was followed by no improvement. I then gave him a constructive line of treatment; this was followed by some improvement in his general health, but there was no change for the better in the suppurating condition. After about a year the right elbow became affected; the arm pits never healed and I then put him in the St. Joseph Infirmary and scraped out every place that was in a condition of suppuration or open. At that time the elbow was perfectly flail-like in its action, no power at all, but since the operation he has gotten considerable power. I have been very much interested in the case because I could not determine just what

the diathesis was; I do not think it is tuberculous. I have always had the suspicion that it is specific, but there was no improvement under the usual active treatment by the various methods—mercury was given first, afterwards large doses of iodide of potassium. An immense amount of broken down material was scraped away, and there has been considerable improvement in the last year. At no time during this period has he been compelled to quit his work, except for two months when I advised him to quit and go to the country. There is absolutely no history on his part of a primary sore, and no history of tuberculosis in the family.

DISCUSSION.

DR. E. R. PALMER: I do not think Dr. Vance's reasoning that because the patient is not emaciated is against the idea of tuberculous trouble. I often see tuberculous glands of the groin in persons of a lymphatic temperament, who are apparently well nourished and in robust health.

DR. WM. BAILEY: Have the discharges ever been examined microscopically?

DR. A. M. VANCE: No.

DR. T. L. MCDERMOTT: I have a case under observation at the present time, whether it is similar or dissimilar I cannot say. I have had two cases of multiple abscess, whether specific or non-specific I

do not know, one of which was extremely interesting. He had been treated by many of the most prominent physicians of Louisville, including Drs. Cowlings, Crow and Yandell. Dr. Frerick had made an incision and scraped out the abscesses, also removing several pieces of bone. This patient had abscesses upon different parts of the body at different times. I was taken to see this man and prescribed elixir iodo-bromid calcium Co., not with the idea, however, that it would particularly benefit him, as it was strictly a surgical case in which I was not interested. I was greatly surprised about two months afterward to see the patient get out of a buggy and hobble into my office on crutches after he had been in bed about a year; after he had been to Europe and consulted some of the most eminent surgeons there and spent a fortune in doctor's bills in his efforts to get relief. He continued to improve and eventually became entirely well, not having an abscess since. Whether there was any virtue in the medicine, or whether the time had simply come when nature had removed the cause of the trouble, I am unable to say.

I have another similar case now. Dr. Roberts has seen the patient with me and I am sorry he is not here to-night. Some of the joints have become ankylosed as the result of abscesses, and abscesses have also appeared in other parts of the body. We cannot find any specific history. I have put him upon the same medicine, and although he is an aged man and broken down, the abscesses are healing. In the first case I did not believe the abscesses due to hypodermic injections.

DR. A. M. CARTLEDGE: This does not have the appearance of tuberculous trouble to me, and I am not inclined to look upon it as tuberculous in character. I think it is probably syphilitic.

DR. A. M. VANCE: I saw the case Dr. McDermott speaks of (first case) and I think one reason the abscesses never healed was owing to the hypodermic injections given by one of the physicians who treated him; certainly the abscess I saw was due to an unclean hypodermic.

**PATHOLOGICAL SPECIMENS — INCARCERATED TESTICLE—STRANGULATED
HERNIA—OPERATION.**

DR. A. M. VANCE: This specimen is a testicle removed some time ago; my reason

for not reporting the case earlier is that I have not seen Dr. Irwin present at any of the recent meetings, and as he was connected with the case I have waited until he attended one of the meetings. The patient was a man sixty-two years of age; Irish, and a great many years ago, when he first came to this country, he gave the history of pain in the region of the right groin to Dr. Coleman Rogers, who advised him to wear a truss in anticipation of a hernia. Dr. Irwin was the attending physician in the case for some time prior to the incarceration of this hernia, which took place the day I was called. At eleven o'clock Dr. Irwin was called and found a large hernia of the right side descended and could discover this testicle in the lower portion of it. After some difficulty he reduced the whole mass and told the patient to hold his hand on the ring until he (the doctor) could go after a truss. When he returned a smaller mass was present at the site of the hernia which he could not reduce completely, though it seemed to be easy to make it less in bulk. I saw the patient the same night at eight o'clock. We put him to bed and advised rest until the next day. There were no active symptoms of strangulation or of obstruction at that time, and we advised him to call us in the night if he had any trouble. He was a very eccentric man and did not call us during the night, though we learned he complained of severe pain. We saw him at nine o'clock the next morning and from the aggravated symptoms we decided there was obstruction and advised immediate operation which was consented to, but he would not go to the Infirmary, insisting that the operation be performed at his home. We opened the sac and found nothing but serum in it, quite a quantity of fluid also came from the cavity through the hernial opening. I enlarged the opening, practically making a laparotomy of it, and found that a coil of intestine, probably eight or ten inches, was strangulated, the strangulation being produced by slipping of the gut through the opening between a band and the testicle. The testicle was in the abdomen with this coil of intestine. The intestine was quite red, though after relief of the constriction it returned to normal color. I removed the testicle and did a radical operation for the hernia. The man further showed his eccentricity by

driving away the attendants we placed over him until we could get a professional nurse, getting up and walking about the room, getting on a vessel and having an evacuation of the bowels, etc. On our next visit we found him in collapse and he died at midnight same day of the operation. I take it that owing to his having gotten up and moved about, the ligature slipped, when hemorrhage took place, or there was some other cause for the great shock, as the operation was very satisfactory and it seemed that the man had every chance of recovery. No post mortem was held.

INCARCERATED TESTICLE — HERNIA — OPERATION.

This testicle was removed from a boy ten years of age for a condition similar to the case just reported, without the strangulation. The testicle was removed and radical operation done for the hernia and the boy made a good recovery.

SARCOMA OF HEAD OF TIBIA—AMPUTATION.

Here is a very interesting specimen to me. The patient was a girl about fifteen years of age; a robust healthy looking subject, who had the first symptom of trouble about the knee joint March 1st, last. I saw her a week ago with Dr. Krim. There was a large tumor occupying the inner side of the leg beginning at the epiphiseal line of the tibia and extending down several inches, with history of having rapidly grown. There was no elevation of temperature and the only trouble experienced was pain of an acute character; there was no fluctuation in the tumor. I was of the opinion that it was a rapidly growing sarcoma of the head of the tibia, and advised an incision and if this was proven to be the case, or if there were other conditions to prevent conservative treatment, to amputate. After some procrastination incision was consented to, Dr. Yandell having seen the case in the meantime and agreed with me in the procedure. I made an incision and found the periosteal structures very thick, the bone completely denuded, and the whole interior occupied by a soft mushy mass. This thinning out had taken place so thoroughly that spontaneous rupture of

the tibia might have occurred without any great effort. After removing the mass and finding that the tibia was involved for fully six inches, I amputated the leg just above the knee. Patient has done well since the operation. Microscopical examination (by Dr. Frank) proves the trouble to be large round cell sarcoma.

REMOVAL OF BREAST FOR TUBERCULOUS CONDITION.

The last specimen is the breast of a woman twenty-five years of age, which I removed for tuberculous condition. She gave birth to a child two years ago and an abscess occurred and has remained open constantly; that is, whenever one opening would close it would re-open at another nodule, irrespective of the former sinus. You will notice that there are a number of nodules occupying the breast. Recovery has been uneventful except that the patient had secondary hemorrhage.

DISCUSSION.

DR. J. W. IRWIN: Referring to the first case reported by Dr. Vance: I think it is proper I should make a statement, owing to some misunderstanding that has arisen as to the conditions which were operative in causing this man's death. (I refer to Mr. J. D. O'Leary). He was a rather singular gentleman; he had been under my care six months for another trouble. Dr. Bailey saw him once in consultation with me while he was suffering from an affection of the bowels. I discovered two weeks before his death that he had a hernia and advised him to wear a truss. He would not be persuaded that a truss was necessary from the fact that he said he had had the hernia all his life and had never worn "one of those things"; that the hernia came out during the day and went in at night. I assured him that all forms of hernia were dangerous; that some time the bowel would come out and could not be replaced, that this was the rule. The hernia might come out a great many times and be reduced but would eventually come out once too often. He insisted that he would not wear a truss. When the rupture took place I cannot say, but it must have been the night before I saw him. I saw him at eleven o'clock the day before he died and discovered the hernial

protrusion. He was in great agony, with all the symptoms of gastric pain, etc. I found a protrusion the size of a double fist, a great part of which was serous. After considerable trouble I was able to reduce it completely, and after reduction he was entirely relieved of pain. I left him lying flat on his back on a couch and instructed him to hold his finger over the opening to prevent the bowels slipping out again, while I procured a proper truss. He still insisted that he would not wear a truss but I left to get one and soon afterward returned to learn that he had gotten up and walked about the room, removing his finger from the opening, when the hernia came out again, but not to the same extent as before. I found him again in great pain and tried to reduce the hernia, but it was impossible to do so the second time. I then suggested that Dr. Vance be called, which was done and we made another effort to reduce it. We finally came to the conclusion that the obstruction was due to a retained testicle in the canal preventing reduction. In fact the diagnosis made by Dr. Vance and myself was so accurate that after the operation we found exactly the condition existing that we had stated would be found. The operation I want to speak of as being one of the most cleanly and at the same time one of the most conservative that I have ever seen. It would be safe to say that Dr. Vance removed at least two feet of the intestine, or more, through the opening before he relieved the constriction. He made quite a large opening, really a laparotomy. I do not believe the patient lost in all over a half teaspoonful of blood, the operation was done so carefully and so well. The patient did well after the operation as long as he remained in bed, but tried to persuade all of us, even Father Brady, the Priest, that he did not need a nurse. He further said that he had decided not to allow a nurse to be employed, and that he knew what he was talking about and would show us that he would have his own way just as he had refused to go to the Infirmary to be operated upon. He afterward drove Dr. Rice away, who had been left there to nurse him for a short time, telling him, I believe, that he did not need his services any longer. Mr. Faulds was then allowed to remain with the patient until I could return with a trained nurse which I had

been looking for and had in view. The patient in order to show that he did not need a trained nurse, got out of bed, had an evacuation of the bowels and walked over to the window, sat down in a chair and looked out, went back to bed and soon after got up again. When we called at five o'clock or a little after, we found him, as Dr. Vance has said, in collapse, and ten minutes before twelve o'clock he died. There was nothing in the case, up to the time he got up and walked about, that would indicate anything else than that he would make a good recovery. I do not think his death was due to the operation at all, but believe it was due wholly to disobedience. I told the priest this at the time, and he agreed with me because he said the patient was a man self-willed; though gentle in his manner, he was determined to have his own way when he could. In this instance he did have his own way and he died.

DR. A. M. CARTLEDGE: The character of the obstruction makes the case a very interesting one to me. It only proves that in these old cases of hernia where there is an undescended testicle, it is impossible to tell the character of the obstruction until operation is performed.

The tibia case is also one of extreme interest. But for the microscopist's revelations I should be inclined to look upon the case as one of osteitis with its starting point at the head of the tibia. I believe that this, like a great many of cases we formerly looked upon as tuberculous, might be secondary osteitis grafted upon an osteo-sarcoma. In other words, the trouble being originally sarcomatous in character. We ought to have more of them examined by the microscope.

DR. A. M. VANCE: My idea of rapidly growing sarcoma was based upon the fact that the whole thing grew in three months; twelve weeks ago the patient was perfectly well, no fever, and while the pain was severe there was no evidence of fluid or breaking down. Very little fluid was found at the operation, and this was probably pus or some product of the sarcoma.

PECULIAR CASE OF APPENDICITIS.

DR. A. M. CARTLEDGE: Last Tuesday evening at eight o'clock I was called to see a patient in consultation with a physician,

who gave the following short history of the case. Sunday morning he was called to see a boy who was taken with pain in the abdomen and diarrhoea, getting up very often, straining and having some small fecal evacuations; vomiting came on Sunday evening which he said was uncontrollable by all ordinary means. Sunday evening he concluded he would try ten grains of calomel; this quantity was given the patient which arrested the vomiting. On Monday morning he again visited the patient, some little nausea was present and slight tendency to vomit. He tried bismuth and carbonate of soda, etc., and during the day, Monday, he resorted again to the use of calomel with Dover's powder, which put the patient to rest again. On Monday three injections of water and glycerine were given which failed to move the bowels. Tuesday morning the temperature was 102° F., abdomen considerably swollen and he ordered some salts; vomiting continued, and another injection—a very high enema—was given without any result. On Tuesday evening he came to me with the statement that he had just left the patient with a pulse of 150, persistent vomiting with an incessant desire to get up and stool. I told him I thought it was a case of intussusception from the history given. I saw the patient about eight o'clock, found the abdomen greatly distended, pulse not as rapid as stated. I made it 132, and the boy's condition was indeed a very grave one. Vomiting was projectile and stercoraceous in character and I gave it as my opinion that it was probably a case of intussusception and advised immediate section. I returned to the city to get my instruments to do a laparotomy and at twelve o'clock the operation was performed. When the peritoneal sac was opened a great amount of fetid pus was evacuated; it welled up as soon as the incision was made and seemed to originate in the right iliac fossa. The intestines everywhere were matted together, and inflated with gas, each loop that came out showed evidence of adhesion to the loop that came in contact with it. Peritonitis was advanced. I found a mass in the right iliac fossa of considerable resistance, and upon drawing it up discovered that it was a portion of intestine constricted as though a band had been passed around it. After working in this region for some

time I fished up this little enterolith, and soon found the vermiform appendix which had ruptured, showing that the original cause of the trouble was in the appendix. The appendix and this enterolith were carefully removed. Evidently the appendix had ruptured early in the attack and nature had thrown out a wall of lymph as a protection against infection of the general peritoneum; then this band of omentum had produced secondary obstruction as well as the original peritonitis. Several gallons of water were used in irrigation, and I determined if I had another case of diffuse advanced peritonitis I would put in three drainage tubes; one in the right iliac fossa, one in the left and another in the center. Three were used in this case, drainage was profuse. The patient was placed in bed in fairly good condition, but died the following day at twelve o'clock. I think the case an interesting one, illustrating another phase of the appendicitis subject. It seems that there is a never ceasing line of complications in these cases. Here was a typical history of intussusception, barring the tumor, which we were unable to discover owing to the tympanites, when the facts in the case prove it to be appendicitis with rupture and an enterolith in the cavity.

APPENDICITIS.

This is another vermiform appendix removed from a patient about the same age as the one just reported; operation done eight weeks ago. The patient was thought to have typhoid fever; he had a well defined tumor in the right iliac fossa. I operated without opening the peritoneal cavity and found about half a teacupful of pus. The cavity felt quite smooth at first, but in putting my hand down to the bottom of the pus cavity, I found the appendix and discovered that it had ruptured, the opening being a very small one. I made a little traction on it, passed a ligature around and tied it off. The boy made an uninterrupted recovery and was on the streets in twelve days entirely well.

AMPUTATION OF LEG.

Here is a specimen of extreme interest to me, being some blood vessels removed yesterday afternoon. Dr. Vance assisted in the operation. I was called yesterday afternoon to see a young German of power-

ful physique with this history: Last Monday while at work throwing beer kegs upon his wagon, he was seized with numbness of the right leg, almost unable to stand up, and suffered with burning sensations in the bottom of his feet. A physician was called and thought it was paralysis, and he was treated with this idea until I saw him yesterday. I found a German about twenty four years of age of enormous physical development; the leg was cold and lifeless from about 4½ inches below the popliteal space down, no circulation at all; there was already discoloration and evidences of gangrene taking place. The posterior surface of the leg had a peculiar feeling, indicating possible rupture of the tibial. I examined the heart and it was a peculiar one. No valvular murmur could be detected, yet it was a very restless and irritable heart. There were no evidences of fever; temperature 99°F. There were no indications of a rheumatic condition of the heart, though he gave the history of having suffered a severe attack of rheumatism in early life. From the fact that gangrene had already begun, and the apparent lifeless condition of the limb, it was amputated between the knee joint and the thigh. We found very little blood even after the Esmarch was removed. Another strange thing was that the femorals did not pulsate either before or after operation. After getting the patient to bed, Dr. Vance and myself opened the leg posteriorly, and found just at the junction of the tibials a thrombus, although in slitting up the vessels along the posterior part of the leg we did not find anything looking like an embolus, but just these little casts which had obstructed the posterior tibial. The vessels seemed to be thickened on that side and the question is whether it was an embolus from the heart primarily, or whether an endarteritis causing local thrombus. Another question is, owing to absence pulsation of the femoral, whether there is of not a higher obstruction in the vessel and the patient will have the same trouble further up. His temperature this morning was 102° F; to-night it is 100°F; pulse 88, and patient resting comfortably.

SECOND OPERATION FOR CARCINOMA OF THE BREAST.

The next specimen is a tumor of the breast removed to-day from a woman

fifty-five years of age. One year ago this patient was operated upon for tumor of breast, and recurrence was very speedy in the line of incision. I take it that originally there were no enlarged lymphatics in the axillary region, as the axilla was not opened at the original operation; in fact there was very little evidence of axillary enlargement, but at the operation to-day there were several enlarged glands in the axilla. I do not think all the gland was removed originally. In the operation to-day the axilla was thoroughly cleaned out and all suspicious tissue removed.

I report the case especially from the fact that I believe I removed more skin than I have taken out in the removal of any breast; nearly the whole of the pectoralis major muscle was removed, as it was all included in the tumor. So much skin was taken away that of course no effort could be made at approximation. I did insert a few sutures but the majority of the wound was left to heal by granulation and will have to be treated as an open wound. Dr. Vissman was present at the operation and with the microscope made several rapid sections of the skin in order to determine when sufficient was removed to get beyond the malignant trouble. This method is practiced largely in Germany and I believe the microscope can be used in this way to good advantage. The patient reacted very nicely, pulse 100 at close of the operation. The trouble was pronounced by Dr. Vissman carcinoma.

CONTINUED REPORT.—TUMOR IN EPIGASTRIC REGION.

DR. A. M. CARTLEDGE: You will remember this patient was before this Society about four weeks ago; was examined by several of the members present, on account of a tumor in the epigastric region. Several thought the trouble a distended gall bladder, others abscess of the liver. After making an examination at that time, I stated that I did not think it was abscess of the liver. The next day I made a further examination and came to the conclusion that it was a cyst of the pancreas. The day following I performed a laparotomy, following out the idea of pancreatic cyst, making my incision in the median line. After investigating through the incision, I found the case to be unquestion-

ably one of abscess of the liver and about a half gallon of pus was evacuated. I cleaned the cavity very thoroughly and inserted a very long drainage tube after packing the cavity with gauze. The patient has made an uninterrupted recovery; the liver is now about normal in size and the wound has closed with the exception of a very small sinus about a half inch deep.

J. Morrison Ray, M.D. then read a paper on

SOME DISEASES OF THE GRANDULAR TISSUES AT THE BASE OF THE TONGUE—
SO-CALLED LINGUAL TONSIL.

Surrounding the upper respiratory passage is to be found a number of accumulations of granular tissue to which have been given the name of tonsils.

Starting in the vault of the pharynx as an aggregation of lymphatic tissue, under the name of Suschka's gland or the pharyngeal tonsil, it extends on each side toward the orifice of the eustachian tubes, thence as a chain of submucous lymphatics down on each side to the space overlying the superior constrictor muscle, between the palato-glossus and palato-pharyngeus, the so-called pillars of the fauces, where it again becomes aggregated into the faucial tonsil. From these it extends down the lateral walls, between the divergence of the faucial pillars, toward the base of the tongue, where it again aggregates into lymphoid bodies that more or less fill the gloss-epiglottidian fossa, and thus completes a granular circle around the pharynx. Some have traced it still further, even into the ventricles of the larynx, where it may form a recognized enlargement.

The pharyngeal and faucial portion of this ring are found in their highest state of development in childhood, and, if they have never been the seat of inflammatory change, diminish in size as the age of puberty is attained, soon after which they disappear altogether, or present slight elevations marking the base of the original gland. That portion situated at the base of the tongue occupies the space behind the circumvallate papillæ, and in front of the attachment of the epiglottis. In the normal state it is observed best by the aid of the laryngeal mirror, yet I have encountered it so enlarged as to be seen by strong depression of the tongue, accom-

panied by efforts at gagging. With the laryngoscope this tissue appears as a number of elevations scattered in an irregular manner over the tongue, and extending over toward the lateral gloss-epiglottidian folds, with here and there veins of considerable size showing themselves as dark blue lines coursing between the lymphoid collections.

Unlike the faucial and pharyngeal enlargements of the lingual tonsil, it generally shows itself in adults. The cases I have seen were between nineteen and twenty years of age—the majority females.

Anatomically these glands are identical with the pharyngeal tonsil, consisting of accumulations of lymphatic tissue covered with mucous membrane, with here and there, on the summit of the elevation, depressions that mark the opening of the crypts or follicles. When excessively enlarged it represents two lateral masses, separated by the median raphe of the tongue, projecting forward so as to lie in contact with, or even overhang, the epiglottis. Generally, however, we see a number of masses irregularly placed. Within recent years considerable attention has been drawn to this region as the seat of annoying and often persistent discomfort.

Lennox Browne first called attention to a varicose condition of the veins in this locality, giving rise to symptoms of *globus histericus*. He states that there is frequently concomitant evidence of a varicose diathesis, such as rectal hemorrhoids, varicocele, or varicose veins of the extremities.

Rice and Curtis have reported cases of persistent cough and loss of the singing voice, due to hypertrophy of the glandular tissue. I have seen cases showing varicosity of the superficial veins in this locality, and a number presenting more or less enlargement of the glands. All such cases have not, however, presented symptoms referable to the part, and have improved without treatment of the base of the tongue. A few others I have seen wherein the condition was so very marked that the symptoms pointed so distinctly toward this region as the offending area as to make the indication for treatment unmistakable. The symptoms usually complained of are a sensation as if there was a foreign body present, with accumulations of excessive quantities of mucus and saliva and usually considerable cough.

These cases are frequently neurotic and dyspeptic subjects, who have been told they were suffering from catarrh or incipient phthisis.

I can best illustrate my subject by relating a few of the well-marked cases I have observed.

Mrs. R., age thirty-nine, wife of a minister from the southern part of the State, consulted me in 1891. She said that she had been told that her trouble was catarrhal, but her family feared tuberculosis, since a sister had died two years before, at about her age, with this disease. At the commencement her symptoms resembled those she had had for the past few months—these were a cough, a sense of fulness, with excessive saliva and constant desire to swallow, with a raw, burning sensation low down in the throat (this symptom she emphasized by placing her finger on the neck corresponding with the side of the larynx); her voice was husky, and easily fatigued; she suffered from constipation and dyspepsia, and attacks of eructations from the stomach. On examination the pharynx appeared red, congested, and contained a number of enlarged follicles, no enlargement between the faucial pillars; the nose and naso-pharynx were well open, and the turbinates gave no evidence of contact or pressure. The laryngeal mirror showed the larynx healthy. The lower pharynx was much congested and red; the base of the tongue presented a quantity of hypertrophied gland tissue; this was irregularly distributed—on one side a mass hid the epiglottis. The diagnosis I made was enlarged lingual tonsil, with pharyngitis, the latter probably due to the pyrosis.

I ordered a cleansing solution for use in the atomizer, and gave internally a laxative pill and lactopeptine, with bismuth. She left for home in a few days, feeling better. This continued for a short while, when I advised the use of dilute nitromuriatic acid. Under this the regurgitation from the stomach was relieved, and the soreness in the throat disappeared. Two months later she returned, complaining of the fullness, cough, and excessive saliva. Skin being pressed, the pharyngeal redness was much less, but the base of the tongue still presented enlarged tissue. I determined on surgical interference. Painting the parts with a ten per cent. solution of cocaine, I removed sev-

eral masses of gland tissue by means of curved scissors and a pair of post nasal cutting forceps. One piece that overhung the epiglottis was as large as a hazel nut. Some bleeding followed that was checked by hot water held in the mouth and allowed to be slowly swallowed. A few days later a few tags were noticed, making the surface rough; with the galvano cautery I destroyed these. The throat was very sore for several days, and I was unable to do more during her limited stay. I ordered a tannic acid and listerine gargle, and advised a continuance of the internal treatment. She wrote me about three weeks afterward that the soreness slowly disappeared, and with it the sensation of fullness and the accumulated saliva, and that the cough was better.

Mrs. X., age twenty-five. I saw her three weeks ago. (Her case suggested to me this paper). She complained of having been hoarse nearly all winter, and with it a disagreeable tickling sensation that caused much cough. Recently she had much family sickness and anxiety, since which the throat was worse, and felt full, with a constant desire to swallow. On examination the nose and upper pharynx looked comparatively well; the larynx showed thick, reddened cords; the inter-arytenoid space was roughened and covered with partially dried mucus; the base of the tongue showed three enlarged lymphoid bodies—one, the size of an almond, pressed firmly against the left edge of the epiglottis. I cauterized these well with galvano cautery, and ordered steam inhalation, and an alkaline solution for the atomizer, to be drawn well down into the larynx. I have not seen the patient since, but understand the throat was quite sore for a week, but since the voice has improved and the fulness in the throat is less.

These two cases are the only extreme ones I have met. An example of a less severe one is the following:

Miss M., age nineteen, was referred to me by a well-known vocal teacher of this city, with the statement that her head notes were bad, and her voice easily tired. The teacher had seen one case where I was able to improve the head notes by relieving a turbinated hypertrophy, and she suggested to this young lady that she probably had some nose trouble. On examination, the nose was found free of

hypertrophy or septal deflection, and the larynx was normal. I could, therefore, give no satisfactory explanation of her condition, but suggested treatment of the larynx by astringents with a brush, hoping that, by toning up the mucous membrane, an improvement would follow. On examination, preparatory to making an application of zinc chloride to the larynx, I noticed the base of the tongue. It appeared rougher than in health; a number of lymphatics appeared enlarged, and the mucous membrane congested. One gland was particularly enlarged, and the follicle on its surface contained a small whitish concretion. I decided to destroy this gland, and try treatment to this locality rather than to the larynx. I applied cocaine, and with the galvano cautery I destroyed this gland, the seat of chronic follicular disease. It was sore for only a few days. After this I applied, at three sittings, Lugol's solution and glycerine, after which the treatment was discontinued. Soon afterward I was informed that her voice had improved, and was not so easily fatigued.

I have treated a number of cases where the gland was more or less enlarged, without any improvement in the symptoms of which they complained. The three cases were reported for the purpose of showing the undoubted existence of a morbid condition in this locality that was remediable. I have had but little effect from alterative and astringent applications, and gargles do not reach to the locality.

I am convinced that cases do frequently occur, both of acute and chronic follicular disease, yet but slight reference can be found in literature to such a condition. I have recently encountered two cases of acute follicular inflammation of these glands—one, a negro, was in my dispensary service. The second case, Mr. G., had suffered for several days with some pain in swallowing, and it had been diagnosed rheumatic sore throat, and given anti-rheumatic treatment, but his throat had not improved. When I saw him there was no evidence of an acute process in the pharynx or fauces. On using the laryngeal mirror I noticed the base of the tongue on the left side was red, and covered with several follicular exudates.

The glosso-epiglottidean fold was edematous, and when the part was touched with a probe acute pain was elicited. Prompt

recovery followed a few applications of iodo-tannin solution. There is no reason why these glands should not be subjected to the same forms of disease as affect the faucial and pharyngeal tonsil, such as accumulation of concretions, mycotic disease, etc., but they are often overlooked in searching for the cause of a throat trouble.

DISCUSSION.

DR. S. G. DABNEY: A great deal has been written in the last year in regard to the fourth tonsil. One of the most common symptoms of trouble in this locality is probably what is known as "empty swallowing" an inclination on the part of the patient to swallow when there is really nothing to swallow. I have seen a good many of these cases. I have one case just now in this city, a gentleman who has this condition in a very aggravated form, and who has recently been operated on for rectal hemorrhoids. My experience is that there is nothing better than the electro-cautery for the treatment of conditions of this kind. We often find dilated vessels with the glandular enlargement—a condition to which Lennox Browne has given the name of lingual hemorrhoids. There is one symptom I have seen often, which was not mentioned by Dr. Ray, and that is a little spitting of blood in the morning from the breaking of one of these enlarged vessels. Why it happens that this usually bursts during the night I do not know. In a recent number of the *Philadelphia Medical News* I reported several cases, one of which was especially interesting in this connection. It was that of a young lady who had long been troubled by cough and suffocative feeling, seeming to originate in the left side of her throat and occurring just after going to bed. Nose, naso-pharynx and larynx were normal, but at the base of the tongue and slightly catching the epiglottis was an enlargement of the glandular tissue. Destruction of this with electro-cautery gave entire and permanent relief from cough and other symptoms. In most cases of enlargement of the so-called lingual tonsil relief follows application of the electro-cautery and there is no return of the trouble. I do not think the local application of astringents are to be relied upon in such cases, if the hypertrophy is sufficient to cause any serious symptoms

my experience has been that little good can be accomplished by any local medication. I believe what holds true in so many parts of the body is applicable in cases of this character, that the affection in many persons gives rise to no unpleasant or serious symptoms, while in others very disagreeable effects are produced. This may be one reason why we see so many ladies suffering from affections of this nature, the same conditions in robust men not producing any disagreeable symptoms, that is not sufficiently marked to be noticeable.

DR. W. M. CHEATHAM: I have seen a great many cases of the character described by Dr. Ray in his paper. Concerning the question brought up by Dr. Dabney as to why so many slight hemorrhages occur during the night: Possibly it is owing to the fact that the blood vessels contract during the night. Theoretically we would suppose they would occur in the day time when the body is more active, the heart beating stronger and the blood being driven with more force, but my experience has been that the hemorrhages occur more frequently at night. I have used the galvano-cautery in the treatment of these conditions, and occasionally use a tonsillotome and sometimes scissors, but depend more upon iodine than anything else. When forceps or scissors cannot be used I resort to galvano-cautery. The symptoms are sometimes remarkably distressing, but are usually relieved a short time after the operation. My experience is that less inflammation follows the use of the galvano-cautery than any form of surgery. Indications for treatment here are about the same as in inflammation or hypertrophy of other tonsil tissue; at times local medicinal applications give relief, then again surgery alone is indicated.

DR. C. SKINNER: I would like to ask Dr. Ray if he has ever noticed that iodine used as a gynecological application had any effect upon the voice. The reason I ask the question is that last fall I treated a young lady, in the city, a professional singer, using iodine once or twice, and her voice did not get over the effects of it for two months.

DR. J. M. RAY: I would say in reply to Dr. Skinner's question that we frequently find throat trouble to be the result of uterine disease. A well-known Phila-

delphia laryngologist claims to be able to look into the throat and diagnosticate various forms of displacement about the uterus by an examination of the larynx. The question of spitting blood, etc., was not mentioned in the paper because this symptom was not present in the cases I reported, although such a condition is often found and made a prominent diagnostic point by the text books. A point I wanted to make particularly in the paper was in regard to acute inflammation of this gland, you often find a condition resembling acute follicular inflammation of the faucial tonsil. I have seen several of them. Upon looking into the pharynx it appears to be in a healthy condition, yet the patients complained of persistent pain on swallowing. I have treated two or three such cases without thinking of the base of the tongue, and no relief has followed. In others I have treated the base of the tongue and found prompt relief. I believe that often cases of acute sore throat are really acute inflammations of the lingual tonsil. In fact I see no reason why acute follicular disease should not be as common in this locality as it is in the fauces and naso-pharynx.

AN UNUSUAL CASE OF TRIPLETS.—The newspapers report a case of triplets in Nyack on the Hudson, which seems to be one of the most remarkable on record. There were two males and one female, and their aggregate weight was fifteen pounds. The two boys were bound together with a band almost precisely like that in the case of the Siamese twins, while the girl was joined to one of the boys by a band passing from the hip of the one to the hip of the other. The children survived for seven hours after birth. When the death of the girl and one boy had occurred an effort was made to save the life of the third child by cutting the ligature binding him to his brother, but it proved ineffectual.

DERMOID CYST OF THE LUNG.—A case is reported from Vienna, of a dermoid cyst of the lung. The tumor had its origin in the mediastinum, and after involving the lung ruptured into one of the bronchi, the hairs being coughed up in the expectoration.

CORRESPONDENCE.

To the Physicians of Pennsylvania.

BRETHREN IN THE PROFESSION: I am a graduate of Jefferson Medical College, Class of 1890. I located in Noxen, a country town just springing into existence. There was no drug store within ten miles, consequently I was compelled to keep a large assortment of drugs for my own use. I soon developed what might be called a pretty well equipped country drug store which I operated in connection with my practice. I was arrested last June for violating the pharmacy law of this state and am under bail for one hundred dollars for appearance at court, August 14, 1893, at Tunkhannock, Pa. I had a training in the drug business with my father—who also kept a small drug store which he operated in connection with his practice—since I was fourteen years old. At the time the pharmacy law was passed in 1887, I was qualified as manager, which under Section VII, would entitle me to registration without an examination. After I graduated I applied to the board to be registered but they refused to register me, saying that if I wanted to continue in the drug business I would have to stand an examination before the Board of Pharmacy, or wait till I had practiced three years and apply under Section II. I continued right on with my business, expecting to register after I had practiced the three years. When the three years had expired I wrote again to be registered, but a reply came back very quickly that Section II had been repealed just two weeks before and the only way there was open for me was the examination. I complied with their request but was rejected. The Board from the beginning treated me with great disrespect. One of the members when he came to investigate, said to me when I met him at the depot and showed him all the courtesy I could, "We will go and see what kind of a ranch you keep."

I understand that the Board intends making this a test case.

I appeal to all my fellow graduates to aid me to make a defense.

Fraternally yours,

Noxen, Pa. G. H. TIBBINS, M. D.

Bromide of Potassium for Invagination.

EDITOR OF MEDICAL AND SURGICAL REPORTER:—The morning of March 10, 1889, I was summoned by Mr. S. who stated that his wife had suffered from colicky pains all night and was growing worse. The lady was aged 24, and four months pregnant; they supposed she would abort. In making examination I could readily distinguish a tumor in the region of the ileo-cæcal valve with other symptoms attendant upon invagination of the bowel. I gave her opium and belladonna. In the evening her condition was no better and I gave an enema of hot water but with no relief and continued the opium and belladonna. The next morning the patient was worse, showing considerable shock. As we were far removed from an abdominal surgeon, section could not be seriously considered. As bromide of potassium is one of our best antispasmodics, and as the disease under consideration unquestionably is of that class, I concluded to give it as a *dernier ressort*. I gave it in doses of ten grains once every hour, and in ten hours after giving the first dose the invagination was reduced.

I am well aware that a single case does not prove anything, but as bromide of potassium is the remedy *par-excellence* in certain forms of infantile colic, and as both diseases belong to the same class, viz, spasmodic, why should not the drug have a curative effect in intussusception if it has such action in its analogue? In my experience this valuable agent exerts almost a specific action on spasmodic diseases of the intestinal tract, and, with enough opium and belladonna to control deranged peristalsis, we have in bromide of potassium an invaluable medicine in all cases of invagination at all amenable to medicinal treatment.

The effect in this case was striking and unlooked for, and since in no text book can I find the salt mentioned as a remedy in this disease, I desire to give my happy result publicity throughly THE MEDICAL AND SURGICAL REPORTER.

HARVEY VANNATTA M. D.

Seal, Ohio.

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SATURDAY, AUGUST 19TH, 1893.

EDITORIAL.

SPECIALISM IN MEDICINE.

The day has long gone by, never to return, when it was possible for one human intellect to master all that was known of medical science. As a necessary result of the increase of knowledge, medical literature has been divided and subdivided till there is no end to its ramifications. The old doctor,—physician, surgeon, obstetrician all combined in one—has gone, and in his place we have three practitioners, each with a special branch with which he is more familiar than his neighbor. Doubtless this has tended greatly to the increase of learning and to the physical welfare of mankind in general, but is there not a danger behind it all that has been creeping on so slowly that it has hardly been recognized as a danger at all? Is there not a tendency to enter into a specialty without the previous general training that should fit the man for the practice of that branch of medicine to which he is most drawn by his liking and tastes.

Perhaps this is most marked in that newest and most entrancing specialty,

abdominal surgery. Allured by the brilliant results of a few operators and by the seeming simplicity of the operations, men have rushed into the field and proclaimed themselves masters of a division of surgery of which they knew little and into which they were drawn by the wave of enthusiasm with which the profession received this new offspring of medical science. Men, fresh from the college benches, with the newness of their diplomas still painfully apparent, have been tempted into the department of surgery that above all requires a cool head and a thorough mastery of all the resources of the surgeon's art. The result has been disastrous in many instances, lives have been lost or rendered unbearable from the untimely zeal and eager desire of these men to stand in the sacred temple of fame. Lured by the results of operators who have achieved their brilliancy as operators and their magnificent roll of lives saved on account of their long, painstaking years of work in this direction, these new comers have

entered regions that should have been holy to them and over which should have been written the legend "Noli me tangere."

The outcome of all this is easy to see. Any specialty into which men enter unprepared, must decline and lose its position among the handmaidens of medical science. In none of the branches of human arts or learning do men begin with as little practical knowledge as they do in a medical specialty. The young lawyer, fresh from his Blackstone, does not pose as an authority on the relations of landlord and tenant or become the great expounder of international law. He sits down quietly at his desk and watches the work of others who having been toiling at legal mysteries for years before him. Patiently, he goes on looking up points for some great legal battle in which the head of the office is engaged, gradually becoming more and more versed in the intricacies of his profession, till at last he can take his place among the chiefs of the legal army, and other young braves do the drugery that he has done for so long.

A man whose diploma proclaims greeting to all with whom he shall meet, and that the bearer has become very learned in the arts of mechanical engineering, enters the machine shops of a railroad. The officials do not greet him with "here comes a specialist, let us make him superintendent of motive power." He begins at the bottom, cutting threads on the bolts of the great machines that he hopes some day to have in his charge. Step by step he climbs through the grades of work in the shop till he stands as engineer on the foot board of one of those leviathans whose construction he has so laboriously assisted in. His college work has been taken only for its theoretical learning and not till he has mastered the whole practical part of his profession, from the thread on the smallest bolt to the maintaining of the fire that will supply motive power and the guiding of the locomotive

through its daily task, is he fit to superintend the care of the company's motive power.

Thus will men do for the preserving of their legal rights and property, but when it comes to their lives they seem strangely indifferent. It remains for the doctor himself to fit himself for his duties. It is right that there should be specialists, but it is not right that they should be without the training that can be obtained only by a knowledge of general medicine and a careful preparation for their work by watching the work of the masters of their art. In our advance in the teaching of medical science we may have thrown overboard some things that are useful. The young practitioner of fifty years ago studied in his preceptor's office, and while he only got a narrow view of the practical side of medical work, he also got the method thoroughly drilled into his head. The modern student should study not only books, but men and methods. Let him choose an older man whom he will follow as a master and when he has become grounded in his master's specialty, then is he competent to stand before the people in the rank himself of a specialist.

CHRONIC alcoholism may be attended with symptoms resembling those of general paralysis, but the former are not progressive if the alcohol be withheld, while the latter, once manifested, continue to a fatal issue. The lesions of chronic alcoholism also most closely resemble those of general paralysis, but in one condition careful examination shows that the morbid changes fundamentally involve the intima of the vessels, while in the other it is especially the adventitia that suffers.

PROF. HARE says camphor monobromate has been found very useful in cases of delirium tremens, in which the gastric mucous membrane is depressed and out of tone, and in which the nervous twitchings are troublesome.

TRANSLATIONS.

SERUM-THERAPY AND THE TREATMENT OF TETANUS.†

Chouppe (*Le Bull. Med.* March 26, '93). says that since the first memorial of M. M. Behring and Kitasato in *Bull. Med.* 1890, p. 1085, repeated attention has been given to the attempts that has been made to cure tetanus by injections of immunized animal serum. These attempts have thus far given negative or doubtful results. Behring and Kitasato argued that the blood of animals rendered immune to tetanus possessed the property of destroying the tetanic toxins and of vaccinating the animals against the disease. Shortly afterwards Behring confirmed the curative power of injections of antitoxic serum in mice already presenting decided symptoms of tetanus. This was the first attempt at the treatment. The vaccinating properties of the serum of immunized animals, its marked activity in destroying the toxins of tetanus when the serum and toxins are mixed either *in vitro*, or in the body of the animal, if injected simultaneously at the same point have been confirmed by several experimenters (Tizzoni and Cattani, Vaillard, Roux and Vaillard). This power, however, is of much less duration than Behring and Kitasato believe.

Behring and Kitasato had noted in their first memoir the possibility of curing tetanus already established by the injection of antitoxic serum. A little later, Kitasato confirmed these first conclusions by experiments on mice the subject of tetanus. These results, which were nothing less than the promise of a curative treatment of tetanus, were studied experimentally upon animals, at first by Vaillard who achieved only failure, and then by Tizzoni and Cattani who did not succeed any better. Moreover, the last experimenter noticed that the serum was not curative, even when the injection was practiced before the appearance of the tetanic symptoms, if, indeed, the injection was made only a few hours after the introduction of the toxin. Nevertheless, Kitasato pursued his researches, and in a new memoir he cited the results of the treatment of confirmed tetanus in mice. The result was as follows:

† Translated for THE MEDICAL AND SURGICAL REPORTER by W. A. N. Dorland, M. D.

A dozen mice were inoculated with a solution impregnated with tetanic spores. At the end of 35 hours all those animals presented the symptoms of tetanus. Two died tetanic 55 hours after inoculation. The other ten were treated by intra-peritoneal injections of antitoxic serum. Five of those died tetanic in 48 hours; the remaining five were cured. Behring on his side has published recently an article upon the experimental treatment of tetanus (*Der Tetanusheilserum*, Leipsig, 1892); he has cured mice, sheep and a horse, in which tetanus had already developed before the commencement of the treatment. This shows the present status of the question. Roux and Vaillard have performed all of the experiments previously made, and a great many new ones, and their conclusions, which are nearly all negative, may be accepted. They have established the following point: when the antitoxic serum is injected long after the toxin or after the inoculation by the bacillus, so that lesions are already produced, it is unable to prevent a grave tetanus; if it succeeds it is only in the slight forms where cellular lesions are only tardily produced. But when the tetanic symptoms appear the nervous cells are already profoundly modified, and in their condition it is probable that the serum cannot be curative. In performing their experiments they have divided them into two classes: 1. Infection by the toxin; 2. infection by the spores deprived of the toxin. Whatever may be the mode of infection it is very difficult, they conclude, to cure an established tetanus in animals. When the first symptoms appear, the quantity of toxin elaborated is most often sufficient to slay the animal; it has acted upon the cells and the antitoxin cannot do anything to a poisoning already made.

A point to be borne in mind is that the subcutaneous injections of antitoxic serum have been entirely inoffensive in animals; all the probabilities are, therefore, that they will be also in man. In no instance can any bad effects be traced to the serum injectors. Kitasato made the first injection ever made in man. It was unsuccessful,

because it may be that the case was a grave one and the treatment begun too late. Tizoni and Cattani in Italy have employed the injections in eight cases, all followed by a cure (*Centrall. für Bakteriolog. and Parasitol.* Nov. 24 and 25, 1891). Their results, however, cannot be relied upon, since Albertoni claims that the cases

treated and resulting in death were not published. Chouppe would conclude from his studies that bacteriologic researches relative to tetanus have not yet given an agent of an appreciable curative power in established tetanus. The only thing left to the physician is excision of the infected wound, and the use of nerve sedatives.

EXTIRPATION OF A SPLEEN FOR TRAUMATISM.*

Reigner has reported a case of extirpation of an injured spleen following traumatism, (*Berlin Klin. Wöchen*, 1893, No. 8). He performed the operation on a boy aged fourteen. An outline of the history of the case would be of interest. On the day after the fall the pulse became gradually weakened; increasing pallor and dullness in the lower portion of the abdomen. The diagnosis was made as an intra-abdominal hemorrhage, necessitating an abdominal section.

On examining the interior of the abdomen there was found a transverse tear of the spleen of such dimensions that the lower portion was almost entirely separated and unconnected with the hilus of the spleen. The entire separation of the large blood vessels was regarded by Reigner as favorable, since the bleeding could only take place through one surface. The lower portion was at once separated and removed with other blood clots, the upper blood vessels and phrenico-lineale ligament was speedily and thoroughly ligated. After a careful examination further injuries could not be found.

Healing of the wound and apparent entire recovery after twelve days; unfortunately gangrene set in through venous thrombosis, which made it necessary to perform an amputation four weeks later after the method of Gritti. Recovery seven weeks later.

This case was carefully watched by the author; seven months after the removal of the spleen he noted the patient's condition as good, the various functions seemed to perform their normal duties. The liver normal in size, but all external chains of the lymphatics are swollen; four weeks after the operation isolated glandu-

lar swellings were occasionally noticed; now after seven months isolated plexus, for instance in the axilla, were found to diminish in size. The thyroid gland seemed enlarged. The medulla of the bone of the amputated limb shows a more active formation in the medulla than was to be expected. There had been an active increase in the blood vessels in the marrow of the bone, the canaliculi were contracted, the haversian canals were enlarged. The new marrow entered into the periosteum which could be seen distinctly by the naked eye, reminding one of the description given by Neumann and Mosler, as they had observed it in the animals upon which they had removed the spleen.

The examination of the blood showed that the increase or decrease of lymphocytes depended comparatively upon the glandular enlargement or contraction, and at the time of their decrease there was noted an increase of the polynucleated cells. There was nothing abnormal in the examination of the marrow other than active growth of the same. This was also affected by the variation of the glandular system.

Changes of the red blood corpuscles were never found; granular red blood cells, etc., were also absent. The author promises further communications upon this one very interesting case, as well as some experiments which he expects to perform on animals.—*Centrall. für Chirurgie*, No. 23, 1893.

Acne.

Unna prescribes the following ointment for acne:

| | | |
|---|-----------------|--------------------------|
| R | Unguent. zinci | } aa 10 parts. |
| | Lanolin | |
| | Calcii chloride | |
| | Sulphur præcip. | |

*Translated for THE MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

ABSTRACTS.

THE PATH OF IMPROVEMENT IN CANCER TREATMENT.

Dr. Herbert Snow, of London, in writing on this subject in the *Medical Press and Circular* says that: Cancer has long been regarded as the opprobrium of surgery, and I fear there is little doubt that the heroic new departures in surgical procedure of which we now not seldom read, will in the main rather intensify than lessen our reproach among men. Yet I cannot help thinking that were certain definite principles and axioms in the pathology, diagnosis, and treatment of malignant disease more clearly taught in the schools, and more accurately appreciated by the profession than has been hitherto the case, we should soon witness a corresponding improvement in results, an enhanced confidence on the part of the general public, with a proportionately less eager resort to the nostrums of quacks. I purpose here briefly to set for the a few of these:

1. *How does Cancer Kill?*—A complete reply to this question would involve a discussion of numerous technical details, which need not here be referred to. Sufficient for the present purpose it is to point out that, in those cases which especially claim the care of the surgeon, life is terminated much more often and in much greater degree by the metastatic offshoots than by the primary lesion, or by any consequences directly arising therefrom. That a malignant tumor thus more often kills indirectly than directly, by reason of the infective and autositic properties which its cell-elements have acquired, and by the ready transmission of these *per* the blood or lymph to distant parts. Of old the "recurrence" of cancer was attributed to its constitutional origin. That view has been dispelled by the advances of modern pathology, among which, by reason of its important practical bearings, I would take leave to mention my discovery of the insidious marrow-infection which accompanies ordinary breast-carcinoma. We now know that every species of cancerous neoplasm commences in a limited tissue area, whence contagious particles are transmitted by definite "infection-paths," which can nearly always be predicted.

From this principle may be deduced significant practical corollaries. First, that axiom upon which I conceive the future improvement of cancer-surgery most of all to hinge: of removing all the dangerous lymph-glands in the "infection-path" of a carcinoma or epithelioma, before they have had time to undergo increase in bulk. Thus the fatal progress of the infective lesion along its natural track is intercepted; and perchance complete extirpation may be effected. We should never attack an epitheliomatous tongue or lip, unless in a very advanced stage, without seeking also to remove the glands certain to be already infected, viz., those upon the anterior edge of the submaxillary serous gland, when the lip or fore-part of the tongue is diseased the cervical, opposite to the angle of the lower jaw, when the hinder regions of the tongue are first affected. We should only in rare cases excise a carcinomatous breast, without simultaneously evacuating the corresponding axilla. A melanotic or epithelial sore on the lower extremities or libia, should enjoin simultaneous attention to the surface lymph-glands in the inguinal region on the same side, and so on.

If, on the other hand, we wait until the lymph organs in question have undergone appreciable enlargement, we may be reasonably certain that the infection has already passed to other glands beyond our reach, and will eventually reappear (recur). Gland-enlargement is a relatively *late stage*: we have a previous one of tenderness merely, and before that of insidious deposit not attended by symptoms. Each of these in carcinoma lasts several weeks. Needless to point out that from the lymphatic system germs eventually reach the blood. To excise with the usual display a malignant primary tumor, when we neglect the secondary deposits which we know must have already ensued, is a sham operation, not a real one.

Again, it is commonly of more consequence to the individual to remove these secondary deposits than to take away the primary cancer, even when no more than immunity from future suffering, and transient prolongation of life can be hoped

for. The evacuation of the axilla with a breast carcinoma serves effectually to preclude that very distressing symptom "brawny oedema of the arm," due to lymph-stasis, combined with constriction of the axillary vein by a ring of cancerous parenchyma in the lymphatics. The suffering attendant upon neglected epithelial deposit in the cervical lymph glands of a physically vigorous man must be in every one's knowledge. The primary lesion of melanotic cancer of the integument (in the majority of instances, an epithelial disease generated in the deeper layers of the Malpighian rete) is commonly to the last a small ulcer or warty growth of the most insignificant dimensions. It can be radically extirpated, as a rule, without difficulty and without the least fear of local "recurrence," though too often the disease process is carried on to its fatal end by means of the previously infected lymph glands (see cases republished in "Cancers and Cancer Process," p. 365).

The routine operative treatment of cancers is greatly to be deprecated. Every single case should be scrupulously dealt with on its own merits, and not on any universal rule, with regard to numerous points of detail, such as the pathological species of the disease, the tissue this is most prone to infect, the idiosyncracies of the patient, etc.

II.—Considerations on Early Diagnosis.—It follows from the preceding that if we seek surgically to extirpate, that is to cure, cancer beyond the possibility of eventual re-growth, we must needs learn to recognize malignant disease, either before secondary infection has been established, or before it has advanced to any considerable distance from the site of origin. The diagnosis is easy enough when the lesion is of old standing, and is then practically useless; to be of real value, it must be effected in the incipient stage.

The subjective and objective signs, as laid down in ordinary text-books, pertain rather to the former period than to the latter, so are of but partial avail. What is really wanted is far greater stress than has hitherto been laid, on *à priori* considerations, so that we may be, as it were, on our guard against malignant processes, may know who is a likely subject for cancer, and who the reverse.

In the work above quoted I have attempted to constitute a novel group of cancerous neoplasms, derived from embryonic vestiges, not perfectly effaced. These, which I have termed blastomata, appear for the most part in childhood. They constitute a numerical minority of the total cancer cases, so do not affect the propositions here put forth in respect of the ordinary malignant disease of adults. Between these congenital neoplasms and the cancer of later life, there is a great pathological gulf fixed. With the exception of this anomalous and exceptional section, cancer is emphatically limited to persons who are growing old. Cancerous males are generally past forty; females with breast carcinoma are seldom younger than thirty-eight; those with uterine cancer, not often under thirty-four. The average cancer age is from thirty-eight to sixty years, and begins a few years sooner for women than for men. Thus persons who have attained this period of life are on that ground alone predisposed to malignancy. Heredity, it may be remarked, is an element which is much more likely to mislead in diagnosis than the reverse. In seventeen years' experience I have learned that a person who comes to me with a strong family history of cancer, is much more likely to be suffering from some innocent ailment than from this dreadful scourge.

The mammae and uterus of women, and the mouth-cavity of men are the elective seats of malignancy in the two sexes, and derangements here apparent during the cancer age, therefore, demand special attention. People, male or female, who have undergone conspicuous impairment of general health, and loss of vitality from any cause whatever, are most liable to cancer-developments. The female organs referred to undergo a normal process of dissolution on obsolescence, and anything which interferes to hinder this is the fruitful parent of malignant growths. In this way mental anxiety and trouble are the common immediate forerunners of mammary and uterine carcinomata; so exhausting illness of any kind (I have known several cases immediately consequent upon influenza), specially toilsome occupations, such as that of the laundress, etc.

Such is the natural tendency in age, and in the degenerating female organs to

cancer, that after the thirty-eight years period, any tumor in the mamma, whether previously noticed, or then appearing for the first time, becomes sooner or later associated with truly cancerous phenomena. Solid connective-tissue growths enclosing gland acine, adeno-fibroma, cystic fibroma are thus always of serious import. Even a simple cyst (sometimes a dilated duct, more often a dilated acinus), quiescent for some years, ends either by developing "intra-cystic vegetations" from its walls or by irritating the contiguous acini into malignant proliferation. These vegetations are most frequently carcinomatous, a less common form consists of embryonic connective-tissue (spindle-celled-sarcoma). A few are composed of well organized fibrous tissue, non-malignant, but always with a tendency to become more embryonic, and so sarcomatous. Thus it should be a maximim of the practical surgeon to regard every mammary neoplasm in an elderly woman as either an actual or a potential cancer.

Young people are particularly prone to lymph gland enlargement upon any slight provocation, most commonly of septic character; the old rarely suffer in this way. Thus any such feature after the age of forty, particularly when subsequent to mechanical violence, and when no septic cause can be detected in the vicinity, is strongly suggestive of primary malignancy in these organs (lympho-carcinoma). Both affections begin insidiously and painlessly. The latter is diffused very rapidly and is one of the most virulent of cancers. Should there be suspicion of malignancy, which, in an elderly person, must always be the case under the conditions mentioned, an exploratory incision should be performed with the least possible delay; thus alone can life be saved.

III.—Importance of certain pathological considerations.—The foremost consideration, from a practical point of view, is the escape of the adjoining lymph glands from infection per the lymphatic vessels, in true sarcoma, whereas in carcinoma and epithelioma, these organs very early become the seat of deposit. If, with a malignant growth developed from connective tissue corpuscles, we find glands in its vicinity enlarged, we know that there is general blood infection, and that metastases are also present in the viscera, consequently that an operation will have no

curative efficacy. Hence in sarcoma, it is unnecessary to remove, as in carcinoma, the neighboring glands; and, if these be obviously attacked, it is generally best to decline operative interference altogether.

Unfortunately, however, a mischievous practice has crept in, of calling any acutely-growing malignant tumor of uncertain origin a "sarcoma," and thus that word has acquired a very vague signification. In the breast, soft cell-masses of encephaloid carcinoma are commonly so-styled; with these there is early axillary deposit, and the contents of the corresponding axilla need evacuation exactly as in the more chronic scirrhus, although the glands often do not exhibit much actual increase in bulk. On section these are gray, soft, pulpy, friable; the true sarcoma here is generally yellowish, its cut surface is fibrillated, and parts may be composed of well-organized fibrous tissue. The two species may generally be differentiated by the naked eye, with, of course, an appeal to the microscope later on. On the appearances disclosed by an incision immediately after removal do the further measures of operative procedure depend.

Symptoms of *marrow-infection* by breast carcinoma, particularly that which consists in a slowly-advancing prominence of the sternum in its junction with the second costal cartilage, necessarily indicate that amputation of the mamma can be palliative only. (For further details, see the work above quoted, p. 66).

IV.—Palliative Operations.—As a general rule it is unwise to attempt the excision of a malignant growth unless the whole of the palpable tumor can be removed; and unless there is good reason to anticipate prompt union of the wound. Cancerous parenchyma cut into, or otherwise irritated, will, as is well known, subsequently grow with greatly enhanced rapidity. Transgressions of this wholesome rule are largely accountable for the popular disfavor into which the surgery of cancer has fallen. The cases in which operative treatment is resorted to should be carefully selected; and there should be no indiscriminate resort to "the knife."

Valid exceptions, however, exist. The suffering by pain and starvation which tongue-epithelioma ultimately involves inculcate the extirpation of the organ at all hazards, even when some fragments

must of necessity be left. And sometimes there is such imminent risk of death from repeated hemorrhage, in the case of tumors elsewhere, that it is wise to attempt their partial removal.

Under all such circumstances, however, it will be well to eschew the knife for two reasons; one, that the patient is often very weak and cannot sustain the loss of blood which any cutting operation would involve; the other, that burning cancerous parenchyma checks its development instead of accelerating it. Even if the resulting wound does not heal, a chronic excavated ulcer will follow; not the exuberant fungous protuberance commonly seen after a measure of the former class. Thus, ablation of the tongue is effected without hemorrhage, shock, or risk by the galvanic *écraseur*. In other parts, a fungous bleeding mass may be shaved off, with much benefit the patient, by the same instrument, or by Paquelin's thermo-cautery.

V. — *Chemical Escharotics*. — Caustic applications in cancer are, of course, the great stronghold of quacks, who thus trade upon the fears of the timid. In carcinoma and the more severe forms of malignant disease they necessarily cause far more pain and shock than the usual methods of treatment. They can not, moreover, be had recourse to by the conscientious practitioner, on account of the principle pointed out at the commencement of this paper. It is the metastatic deposits in lymph glands and deeper tissues, that constitute the real *crux* of cancer surgery; we cannot apply chemical escharotics to deeply-seated glands.

In small superficial lesions, which are not associated with lymph-gland infection, such remedies are not absolutely barred, and may even possess distinct advantages. For in chronic epitheliomata, or rodent ulcers, they often answer admirably. The best is the stick potassa fusa, which acts rapidly and thoroughly, and whose operation may be instantaneously checked by contact with *water*. There is no subsequent pain or shock; the more fashionable zinc chloride is, however, conspicuous for the severe suffering which its use involves. Sometimes strong sulphuric acid in charcoal (or with asbestos, as in the notorious Michel's paste) may be resorted to for the purpose of destroying bleeding fungous granulations, but is apt to run over and injure the

healthy parts. Its work can generally be done much better with Paquelin's cautery. Pastes of every kind are an abomination, slow, uncertain, painful, dangerous. The surgeon who has tried the potassa fusa will not seek any other caustic treatment of cancer.

VI. — *Medicinal Treatment*. — Making certain local exceptions, which must needs occur to every one, the golden rule in cancer not amenable to cure by surgical eradication, is to initiate at the earliest moment the administration of opium or morphia in small, continued, gradually-increased doses. The patient with an incurable malignant tumor should thus become permanently subject to the morphia habit, purposely induced. The drug should be given with the avowed object of arresting and keeping in check the progress of the lesion.

The benefits of this principle are most evident in connection with carcinoma in the female breast, though by no means limited to this. If we are able to get the patient well under the influence of opium before ulceration has taken place, and the case be not of the acute type, we commonly see the organ pass into that atrophic, shrivelled condition of almost stationary disease, which causes no suffering, and is compatible with many years of comfortable existence. In uterine cancer, of which ulceration is a feature *ab initio*, considerable prolongation of life is effected, but not to so marked an extent as in the breast. The practice of withholding opium until compelled by pain to resort to its use, merits unmeasured condemnation from every point of view. Careful tending is imperative, and undue exertion should be avoided; an ulcer should never be permitted to become covered by an unsightly scab, or to emit an offensive smell; rest in bed should be encouraged. A patient who has been operated upon should, if possible, be kept under observation for at least two years subsequently. In any such believed to be liable to "recurrence," and particularly in women who display the peculiar physical signs of marrow-infection, treatment on the above plan should be instituted immediately after recovery. Humanely speaking, the path of improvement which I have here attempted imperfectly to indicate, would seem at present to lie far more in the better use of weapons long ready to our hand than in the discovery of new

APPENDICITIS: WHAT IT IS AND WHAT IT IS NOT—FROM A SURGICAL STANDPOINT.

JOSEPH HOFFMAN, M. D., PHILADELPHIA, PA.

Among many with the fear of surgery before their eyes, there is a widespread and possibly a growing opinion that the advanced surgeon of to-day rushes upon every so-called case of appendicitis knife in hand, something after the manner in which our English friends fearfully dread the wild onslaught of the murderous Comanche in Chicago. To the surgeon holding in his mind the dangers and complexities of all serious abdominal work, most of all that in which the integrity of the vital organs is involved, the eagerness with which this operation is supposed to be sought is amusing. With those to whom the abdomen is as yet a fairyland of surgery, where reputation may be speedily got, and mistakes hastily veiled in the coroner's office by death from heart failure and exhaustion, the fair field is enticing. But woe to the untrained explorer who anchors his tray beside the siren, "Appendix," floating dreamily in a puddle of pus. The electricians are happier than he, and rather to be desired. With a view of insisting rather that surgery and surgeons shall not be held responsible for every vagary of the imagination by which operation is justified, whether cause exist or not, some of the determinate conditions and considerations belonging to the operation are here briefly presented. First of all, the anatomical relations of the appendix must be considered as settled finally within the peritoneum, and therefore, any inflammation of the organ is necessarily within the peritoneum; and inflammation outside the peritoneum, associated with the appendix, is the result of extension of the disease from within, outward. Advancing along in the anatomical conception of the disease, we must remember that no matter what the cause of irritation or inflammation in the organ, we must not expect a common symptomatology or a fixed locality by which the disease is infallibly to be recognized or located. This opinion, in view of the somewhat general belief in the McBurney point, must be explained anatomically. Elsewhere I have referred to the anatomy of the cæcum as insisted upon by Rokitsky, and a care-

ful attention to a few points, *seriatim*, must convince the most skeptical, that although in a few cases the point of greatest pain in appendicitis may be constant, still there is no anatomical ground for this, and the cause is found rather in pathological adhesions in a given line than for any other reason. The cæcum hangs more or less free in the abdomen, and has therefore considerable latitude of motion. There is first, rotation upon its own axis; second, rotation upon the mesentery as an axis; and third, upon another intestine as an axis. By rotation upon its long axis, the cæcum may become so twisted that the ileum opens on the right side, but when revolving on its short axis the appendix may be placed toward the anterior abdominal wall, or it may be placed at the posterior aspect of the intestine. It will be evident that when these motions are concomitant there will be a resultant of motion and that the location of the appendix must vary according to the movement of the cæcum. So far as the mesentery of the appendix is concerned, there is frequently a pouch between it and the ileum consisting of folds of peritoneum; by rotation of the cæcum this mesentery becomes either congested or atrophied and is thrown into a band or perforated, in either way becoming a source of danger to the neighboring intestine, for it may either choke it off as by a cord or ensnare it through the perforation, choking it in true hernial fashion.

If we consider these anatomical relations for a moment, it will be evident first, purely that a physiological motion may result in a dangerous pathological condition, and secondly, that this physiological twisting or revolution approximating it may provoke a symptomatology most misleading, and therefore dangerous so far as it apparently justifies extreme measures. It will also explain how in many cases in which the symptomatology has been presumably grave, the trouble has suddenly subsided and may never again return, for the reason that there has been in reality no real appendicitis by occlusion, retention or secretion, but only a physiological

twist and corresponding irritation which has righted itself. So far for apparent disease of the appendix; now let us look at the real disease, so far as exact location is concerned. It is the universally conceded fact, that in operation for appendicitis, the appendix is not always readily discovered. Some operators fail to discover it at all. Why this should be so, when it is alone the seat of the disease, I do not understand. Why on opening the abdomen it is not always found in the same position is easily explained by the anatomy just referred to. The position must vary with the motion of the intestines with their degree of distension, again by the accidental adhesions of the organ and the adjacent structures, and again by the length of the organ itself. It has been found in the inguinal canal, now up against the anterior abdominal wall, and again in the floor of the pelvis. In women it is no rare thing to find it mixed up with an ovarian cyst, and it may, by extension of inflammation, cause a perforation of the diaphragm. All the facts being considered, it is fallacy to argue that lesions of the organ must have a mathematical constancy, either of kind or degree, or of situation. There must be variation in all them, according to anatomical peculiarities of the parts, and according to the nature and extent of the adhesions and the duration of the disease. These arguments and facts I consider are sufficient finally to dispose of the real value of the McBurney point, although this has had its justification in the brilliant results of the surgeon whose name it bears, and whose insistence upon the legitimacy and true *rationale* of the operation for the disease under consideration has done so much to give it permanency in the advanced surgery of to-day.

What must be considered operative cases of appendicitis outside the presence of abscess, must perhaps for a long time remain an open question. Pus, the advanced surgeon, no matter where its location, considers a legitimate cause for attack, and when once this condition is present, delay is no longer to be considered. As to the diagnosis of pus, the question of duration of the disease and the accompanying symptomatology of pain and tenderness is always to be considered. The temperature is not necessarily high, is often sub-normal, and if there has been

rupture, shock will usually have been present according to the degree of pus-invasion and occupation. If limitation by adhesions has occurred, the patient will rally and further delay will diminish chances of recovery. The point of greatest sensitiveness cannot be regular, and is in most instances traceable more to the discomfort produced by the stretching of adhesions, than to the inflammation in the appendix. If the omentum has become adherent at any point, tension, movement of coughing, turning, or any movement whatever, must be more or less painful. In the real presence of pus, if the inflammation is near the anterior plane of the belly, the walls over the seat of the inflammation are apt to be infiltrated and boggy. If, however, the appendix is deep seated in the pelvis, this boggy, while not discoverable anteriorly, will be discovered by examination per rectum. For this reason, examination by the bowel, which is often left until the last, should be one of the first procedures to establish the diagnosis. If the tumor is above the iliac bone, or near lying to them, percussion may be dull; if, however, the disease is deep seated, there may be tympany, owing to overlying intestine. In arriving at a diagnosis, the moderate and careful use of salines or of calomel is of more than a little use. If the inflammation is only congestive, or is mechanical, the emptying of the loaded bowel will relieve pressure, and thereby permit a general resolution with the abatement of all the symptoms. Moreover, if the tumor is fecal, this is removed and a diagnosis rendered possible if other mass remain. The use of the aspirating needle is precarious in the extreme, and is not to be advised. Pus may be so deep seated as to escape detection, and on the other hand so situated that perforation of the sac containing it be a most dangerous step. Again if the condition of the patient is such as to justify exploration of this nature, incision is no more dangerous and much to be preferred, as at once making a diagnosis, and affording a means for relief. In long-standing cases, motion of the right leg is accompanied by pain, and the thigh is constantly flexed, while its complete extension is either impossible or accompanied with great pain. With the mind directed to the operative features of the disease, careful observation along all the

phases of the attack will generally enable a distinction to be made between cases essentially abscess-like from the start and those of a less degree of inflammation. Among the latter that claim the attention of the surgeon are those recurrent in their type. Given a case recurring at various intervals, each recurrence marked by an increase in the seriousness of the symptoms, to the surgeon holding in mind the probabilities of the case, operation will be usually certain of selection. Every patient holding within his abdomen sufficient cause for periodic attacks of this nature, is never free from danger of a last fatal attack. In these instances the operation during the quiescence of the disease is to be considered. To my mind the argument of Senn for operation after a primary attack of appendicitis, granting that the nature of the disease is well established is logical, and the practice in good hands safe.

In the minds of many, the non-surgical treatment of appendicitis has by far the best of the argument. Case after case is cited in which recovery has taken place under the use of opium, and therefore, in the minds of those who pin their faith on the claims of Alonzo Clarke, surgery has little, if any excuse in appendicitis, if it be remembered that pain and tympany, and rise in temperature, may all exist in the right iliac fossa without the existence of appendicitis at all. Hence if a localized peritonitis, produced by the twisting or revolution of the intestines is present, opium will relieve the pain and consequently, as the gut is also thereby put at rest, in the interim it will have regained itself and the symptoms will abate.

The same logic follows the calomel or saline treatment.

If the gut is slightly twisted and congested, if it be freed from its contents and therefore given a greater possibility of physiological contractions, the normal integrity and relations are at once restored and the pain is at once relieved. Even in the presence of pus the relief of the congestion, brought about by the use of salines often conduces to the greatest comfort of the patient and gives a relief that seemingly interdicts operation. The same is true in tubal and ovarian pus disease in women.

It will thus be seen that the two methods of treatment in the non-suppurative forms

of inflammation both accomplish the same thing in essentially the same manner.

Intertrigo.

Dr. W. de Garmo (*La Semaine Medicale*, No. 12, 1893) recommends the following powder as superior to all other measures in the intertrigo of children and adults:

℞ Powdered starch..... gms. 120 (3iv).
Prepared chalk..... gms. 60 (3ij).
Burnt alum, } āā gms. 8 (3ij).
Powd. bor ic acid, }
Carbolic acid..... gms. 2 (gtts. xxx).
Essence of lemon..... gms. 1 (gtts. xv).

Mix and reduce to an impalpable powder. Use as a dusting powder.

—Pritchard.

A Good Alternative.

Dr. Clark of Youngstown, O., furnishes the following formula to the *Medical Summary*:

℞ Syr. sarsaparillae comp..... 3ij.
Ext. burdock fld..... 3j.
Ext. taraxaci fld..... 3j.
Syr. acidi hydriodic..... 3iv.

M. Sig.—Teaspoonful in water three times a day.

Cramps of the Legs in Pregnant Women.

Administer at bed-time 5 milligrammes of sulphate of copper. This can be given every night without inconvenience.—*La Gazette Medicale*.

Otalgia.

The receipt given below has been found useful:

℞ Menthol, } āā gr. xx.
Camphorae, }
Liq. Albolene..... 3i.

Drop in ear p. r. n.

Urticaria.

Bordeaux has found the following prescription to give great relief in urticaria:

℞ Liquor calcis }
Aque Laurocerasi } equal parts.
Glycerini } M.

Sig.—Apply externally and cover with cotton.

THE subject of animal speech, which is now attracting much attention in the scientific world, will be treated by Professor E. P. Evans in the opening article of the August *Popular Science Monthly*. Professor Evans gives much striking evidence to show that animals communicate among themselves by vocal sounds, and that many of them learn the meaning of human speech.

CURRENT LITERATURE REVIEWED.

THE AMERICAN GYNECOLOGICAL JOURNAL.

for May. Dr. Alexander J. C. Skens contributes a paper on

The Pathology and Treatment of Injuries of the Pelvic Floor.

He divides all the injuries of the pelvic floor into two classes: First, those that occur in the median line of the floor and in direction corresponding to the axis of the pelvis; and second, those injuries that occur above the floor itself, transverse internal lacerations. The laceration in the median line occurs in various forms, from a solution of continuity of all the tissues extending from the posterior commissure to the sphincter ani to a complete laceration of the sphincter. To these well recognized injuries he adds another as the result of his observations, viz., subcutaneous laceration of the muscles and fascia in the median line usually limited to the transversus perinei muscles and fascia, but in rare cases involving the sphincter ani muscle.

The second class of injuries, which are transverse, and have been described as internal lacerations, consists in laceration of the fibres of the levator ani muscles and fascia, and this is usually attended with separation of the muscular layers of the vaginal walls from the pelvic floor. In some cases the laceration is complete, involving the mucous membrane as well as the muscular coat of the vagina, and, in very rare cases, the laceration extends upward and outward as far as the levator ani muscle extends, but as a rule the laceration of the levator ani is subcutaneous, that is to say is not attended with laceration of the mucous membrane of the vaginal wall.

In the median line injuries, extending from the posterior commissure down to and including all the tissues of the pelvic floor at this point, he operates simply by removing the scar tissue, and in so doing vivifies the ends of the muscles and fascia that have been divided. The vaginal wall, which has been attached to the lower angle of the laceration, is liberated and raised up so as to form the inner surface of the pelvic floor. In complete laceration involving the sphincter ani, he follows closely the principles involved in the Emmet operation.

In operating on the transverse or internal lacerations, he follows the classical operation of Emmet so far as the lateral denudation in the vagina and suturing are concerned. In the median line he removes only enough tissue to liberate the vaginal wall from the pelvic floor and then reflects it backward and upwards. He then divides the tissues in the median line down to the sphincter ani muscle, or down to where he finds muscular tissue and fascia, thus producing by incision a complete median laceration. The angles in the vagina are then brought together by sutures down to the muscular tissue of the pelvic floor. The muscles, fascia and

integument are then closed by sutures from below upwards; the enlarged vessels and cellular tissues are then crowded backwards towards the rectum and the vaginal wall united by to the pelvic floor with the sutures, which bring together the lateral edges of the floor of the pelvis. In this way the essential requisites are obtained: first, the central part of the floor is restored, the so-called rectocele is disposed of without loss of the vaginal tissue, the normal relations of the vagina and pelvic floor are established, and the over-distended veins receive more support than can be afforded by any other operation known to the author.

Dr. J. N. Martin discusses the subject of

The Surgical Treatment of Fibroid Tumors of the Uterus.

The various operations for the relief of those suffering from these tumors are discussed by the author who sums up his paper as follows: "I approve that method, with conditions favorable, which leaves the cervix with the stump treated intra-peritoneally, and the lower segment of the broad ligament, for the following reasons:

First. It leaves a stronger floor for the pelvis, and it leaves the vagina in a better condition than when the cervix too is removed.

Second. It is better than fixing the stump in the abdominal wound as it permits of free dilatation of the bladder and there is no traction. The recovery is more rapid, as there is no sloughing mass left to separate and interfere with the healing of the abdominal incision. The operation can be completed with a short pedicle.

Third. The vagina is left in a better condition than with Byford's method. By his method the cervix and tissues about it are twisted out of shape and a mass is left to separate.

If the intra-peritoneal method is adopted we should be sure that the hemorrhage is controlled, exercise perfect aseptic methods in the operation and toilet, and to be certain, drain from the posterior cul de sac."

Dr. Mathew D. Mann also furnishes a paper on

The Operative Treatment of Fibroid Tumors of the Uterus.

In regard to oophorectomy the author believes that the operation has a field but a limited one. He would confine the operation to those cases where a small fibroid is associated with diseased tubes or ovaries.

His objection to the supravaginal method with the clamp is that the tightening of the clamp gives the patient great pain and that convalescence is prolonged. He urges the necessity of drainage in all cases after the intra-peritoneal method of removing these tumors. He also considers the Trendelenberg position an essential to the proper performance of the operation.

The final paper on

The Treatment of Uterine Fibroids.

is from the pen of Dr. Henry T. Byford. The author regards electricity as applicable to interstitial growths, submucous fibroids that do not project much into the uterine cavity. Subserous, multiple and hard tumors, wherever situated, are not much affected by its use. The author states that he employs vaginal fixation almost exclusively in hysterectomy. Abdominal fixation he says is perhaps a trifle the safest, but it is so often followed by hernia, and has such a prolonged and disagreeable after treatment connected with it, that it must be superseded by the first method that will show as good statistics.

Dr. J. M. Baldy contributes a paper on "Carcinoma of the Uterus" in which he urges the necessity of early diagnosis and the early removal of the uterus. Dr. A. Lapthorn Smith discusses "Some of the Elements of Success in Coeliotomy". The author lays stress on the prevention of handling of instruments and ligatures by visitors. He believes stitch hole abscesses are due very frequently to bruising of the structures by pressure forceps or from sloughing from sutures tied too tightly. Of all material for sutures he prefers silk-worm gut. He considers the use of the drainage tube in proper cases as a material aid to the success of the operation, as is also irrigation. He advises that the silk worm gut sutures be left in place for a month in order to avoid the possibility of hernia. This, he says, it is perfectly possible to do if the sutures are aseptic and covered with dry boric acid powder.

Dr. Robert T. Morris contributes a paper on
Appendicitis.

advocating the operative treatment. In regard to the use of opium in peritonitis he gives the two following definitions of the drug:

"First. A drug which stupefies the physician who gives it more than it does the patient who takes it."

Second. A drug which greatly relieves the distress of the physician who without it would be compelled to do something rational for the patient who has put confidence in him.

Opium and peritonitis breed a vampire which lulls the patient to sweet repose while his life is being sucked out, and the doctor is looking the other way."

Dr. A. F. Kinne relates a case of "Dislocation of Both Knees Forwards during Intra-uterine Life."

The remaining papers are: "Conservatism in Operative Midwifery" by Dr. R. R. Lawrence; and "The Induction of Premature Labor" by Dr. L. Ch. Boislaniere.

THE MONTREAL MEDICAL JOURNAL FOR
AUGUST.

The principle article in this month's issue is that by Dr. L. D. Buckley on

The Treatment of Lupus Erythematosus with Phosphorus.

The author states that he has seen the lesions disappear under the treatment in a very considerable number of cases and in a num-

ber of instances he has had the patient under observation for a length of time after the cessation of treatment. He asserts that there has been little or no difficulty in taking the phosphorus when the dose has not been pushed too actively. But the remedy should be given carefully. He believes that we must look for its action through the nervous system.

The form in which he now administers the phosphorus is in a solution,

R Phosphorus.....gr. vj.
Absolute alcohol .. .5xxx.

To be dissolved with the aid of heat and agitation, and then mixed, while still warm, with the following mixture also warmed:

| | | |
|----------|-------------------------|--------|
| R | Glycerin..... | 3iiss. |
| | Alcohol..... | 3jss. |
| | Essence peppermint..... | 3ss. |

Each drachm contains $\frac{1}{20}$ grain of phosphorus.

In most cases he begins with fifteen drops, in water, three times daily after meals. It is well to have the water added quickly after the liquid has been dropped out in an empty glass, and the dose should be taken at once, as he believes that the presence of water changes somewhat the taste of the free phosphorus; if exposed to the air the phosphorus oxidizes, and the less efficient phosphoric acid is formed. Commonly the dose may be increased by one or two drops daily until thirty are taken three times daily; the dose is then increased more slowly, one drop every other day, until forty or forty-five are taken each time, and in rare cases, if it agrees, even a larger amount may be given; but seldom has he given as much as sixty drops at a dose. As the disease yields the dosage is still continued, if well borne, even until the lesions have quite disappeared and superficial cicatrization has taken place.

It is well to watch patients very carefully while taking this remedy, noting the condition of the tongue and of the digestion, and with the least disturbance the drops should be stopped for the time, and proper measures instituted to restore the deranged functions. If there is any constipation or signs of liver disturbance he gives a mild dose of blue-mass, colocynth, and ipecac, repeated on the second night after; if then the bowel discharge has been free and the tongue is not coated the drops may be resumed at a smaller dose than when stopped, and the amount again increased, yet more slowly and cautiously.

In many instances the greatest benefit will result from the administration of full doses of nitric acid after each meal, well diluted, in the interval of cessation of the drops, say for a week, when they may be returned to as before. This course of nitric acid may be repeated from time to time with advantage.

When there is much heat and flushing in the eruption, it will often be better to give, in place of the nitric acid, the acetate of potassium, in doses of fifteen grains, with the fluid extract of rumex, and nux vomica, well diluted, half an hour before meals, as in *acne rosacea*. This he has sometimes seen to have a most beneficial effect upon the eruption, and when the phosphorus has seemed to have lost its effect on the

lesions, he has observed it to take hold of them strongly after a course of a week or so of the acetate and rumex mixture.

Dr. N. D. Gunn contributes a paper on "Gastric Neurasthenia." Washing out the stomach, he states, will often relieve the patient when everything else fails. Change of air is also of use and, in the depressant form of the disease, stimulants and forced feeding are valuable.

Dr. D. J. Evans reports a case of "Dystocia due to Hydrocephalus." The child was born

by the breech but it was necessary to reduce the size of the after coming head to allow of delivery.

Dr. C. F. Martin reports a case of "Ligature of the Femoral for Popliteal Aneurism, Subsequent Gangrene of the Leg, Amputation with Satisfactory Result." The remaining paper is the report of "Six Months Medical Evidence in the Coroner's Court of Montreal" by Drs. Wyatt Johnson and George Villeneuve, who were employed as coroners physicians during the period.

PERISCOPE.

MEDICINE

Poulticing the Ear.

Poulticing the ear may seem to be a simple operation, but there is nevertheless a right and wrong way of doing it, and it appears that the wrong way is the one usually adopted. Dr. Buck says that while heat is one of the best remedies in painful inflammations of the middle ear, and the poultice is one of the best methods of applying heat, as usually put on the poultice has little effect. What should be done, he says, is first to fill the external auditory canal with lukewarm water, the head resting on the unaffected side upon the pillow. Then a large flaxseed poultice is applied over the ear as hot as it can be borne. The column of water is thus kept warm and acts as a conductor of heat between the poultice and the inflamed surface.—*N. Y. Med. Times.*

Miliary Tuberculosis and Gummata occurring in the same Lung; Differential Diagnosis.

Dr. Eugene Hodenpyle (*New York Medical Record*, December 3, 1892), says the differentiation between miliary tuberculosis and small gummata is often exceedingly difficult. The following points of differential diagnosis may be emphasized, although, of course, there are many exceptions to the general statements made:

1. The history of tuberculosis in the one case, and of syphilis in the other, may be of importance.

2. The bacteriological examination is usually positive in tuberculosis, unless the tubercle is very old and fibrous; it is negative in syphilis.

3. Inoculation experiments are usually positive in tubercle, and negative in gummata.

4. Tubercles are usually present in considerable numbers, and are scattered throughout the entire organ and throughout the body; gummatus deposits are usually single, or are present in small numbers, and are confined to a single organ.

5. Tubercles are usually much smaller than gummata.

6. Tubercles show a marked tendency to undergo cheesy degeneration and to form cavities: gummata rarely become cheesy, usually drying up and undergoing calcification.

7. Amyloid degeneration is sometimes present in tubercles, but, so far as known, is absent in gummata. On section, the tubercles appear as round or irregular grayish masses, often soft or cheesy in the centre, and surrounded by a zone of inflammatory products.

8. Microscopical examination will show the presence of tubercle bacilli in the tubercles; but no characteristic micro-organism is present in syphilis. Giant cells are present usually in tubercles, and are usually absent in gummata.

The Changes in the Cardiac Ganglia in Acute and Subacute Endocarditis.

Kusnezow (*Arch. Path. Anat. u. Phys.*) concludes his lengthy and interesting paper as follows:

1. In acute endocarditis the observed changes in the cardiac ganglia occur in the form of inflammatory granulations, proliferation and swelling of the endothelium of the capsule, and albuminoid and fatty degeneration of the nerve cells.

2. The changes in the ganglia in the lower part of the auricular walls depend, in the main, upon the extent of the process of granulation by continuity of tissue from the valves to the fatty tissue surrounding the ganglion.

3. Vacuolation of the nerve cells was not observed in acute endocarditis.

4. Pigment degeneration of the nerve cells of the heart is not always a physiological appearance, and does not always depend upon the age of the individual.

5. In hypertrophy of the heart, pigment accumulations in the protoplasm of the nerve cells is a common appearance.

6. The alteration of the cardiac muscle, in the majority of cases, stands in no constant relation to the changes in the cardiac ganglia.

7. Only in rare cases is it possible to establish a dependence of the power of the heart upon the diseases of the cardiac ganglia, in a pathologic-anatomical manner, during life.—*Lancet Clinic.*

Blood Changes in Syphilis.

Neumann and Konried (*Wiener klin. Wochenschrift*) have made a study of the blood in all stages of syphilis with the following results:

1. The hemoglobin is diminished in the primary stage from 15 to 30 per cent. It remains diminished during the first part of the eruption and in early treatment, but as the mercurials are pushed it rapidly regains its normal percentage.

2. Older contracted cases of secondary syphilis have only from 45 to 75 per cent. of hemoglobin. The anti-syphilitic treatment in these cases increases the hemoglobin, but does not raise it to normal.

3. The late forms of tertiary syphilis are characterized by a low hemoglobin percentage, which improves under mercury.

4, 5, 6. The red blood corpuscles are not diminished in the primary affection, but when constitutional symptoms appear they are reduced one-third. Anti-syphilitic treatment brings them back to normal. Non-treated secondary forms have about one-third the normal amount, which becomes normal under treatment. In the tertiary stage there is some diminution. The number becomes restored by treatment.

7. The number of white corpuscles are diminished in proportion to the diminution of the red corpuscles.

A Variation in Type in General Paralysis.

Bullen's views on this point are (*Jour. of Mental Science*, April, 1893) that although in every particular the type of general paralysis cannot be said to have universally changed, yet it is probable that in some feature or another alteration is to be noted very generally, and that in some localities prominent changes are apparent in the whole form, and that in the following details we may especially look for evidence of variation:

1. Less pure and sthenic type of mania, with more infrequency of occurrence.

2. Greater frequency of primary demented cases, and an earlier onset of dementia in cases where emotional manifestations are primary.

3. Possible increased ratio of melancholic to maniacal symptoms.

4. Modification in the ages of patients attacked, in the duration of the disorder, and in its distribution as to sex.

5. Variation in the relative frequency in occurrence of convulsive and apoplecticiform seizures; in a less sthenic character of the former, and in diminished frequency and fatal significance of them.

6. A possible concurrent change in the meningo-encephalic adhesions (post-mortem).

Tuberculosis Caused by Bites.

A curious and instructive case is recorded in a French contemporary. A woman presented herself for treatment at a hospital under the following circumstances:—Six months previously she had been bitten on

the index finger of the right hand by an epileptic who was suffering from phthisis. The wound resulting from the bite at first began to heal quickly, but subsequently by degrees it commenced to ulcerate, and in the end it became distinctly tuberculous. Three or four months later the physical signs of tuberculosis became apparent in the lungs. Another and similar case is recorded where tuberculous ulceration of the finger resulted from a phthisical husband biting his wife. Auto-inoculation in tuberculous persons also seems possible. Terson of Lille mentions the case of a man who bit his tongue, and the small wound so resulting developed into a tuberculous ulcer, the man being phthisical at the time.—*Med. Press and Circular*.

SURGERY.

Treatment of Appendicitis.

Dr. N. Senn concludes an interesting paper on this subject as follows:

1. All cases of catarrhal and ulcerative appendicitis should be treated by laparotomy and excision of the appendix as soon as the lesion can be recognized.

2. Excision of the appendix in cases of simple, uncomplicated appendicitis is one of the easiest and safest of all intra-abdominal operations.

3. Excision of the appendix in cases of appendicitis before perforation has occurred, is both a curative and prophylactic measure.

4. The most constant and reliable symptoms indicating the existence of appendicitis are recurring pains and circumscribed tenderness in the region of the appendix.

5. All operations should be done through a straight incision, parallel to and directly over the cecum.

6. The stump, after excision of the appendix, should be carefully disinfected, iodoformized, and covered with peritoneum by suturing the serous surface of the cecum on each side over it with a number of Lembert stitches.

7. The abdominal incision should be closed by two rows of sutures, the first embracing the peritoneum, and the second the remaining structures of the margins of the wound.

8. Drainage in such cases is unnecessary, and should be dispensed with.—*Cal. and Clin. Rec.*

New Operation for Bad Cleft Palate.

Mr. Arbuthnot Lane operated on a case of cleft palate by means of a method which he had adopted on a previous occasion. The child was two years of age. The upper lip, with the hard and soft palate, was cleft from before backwards, and the cleft in the palate was of such a nature that it was hopeless to attempt to close it by any of the usual methods. On one side the palate terminated by an oblique junction with the lower end of the vomer, whilst on the other side there existed only the alveolus, which above

was directly continuous with the inferior meatus of the nose. Mr. Lane removed the mucous membrane from the margin of the hard palate on the one side, and on the other he stripped the mucous membrane from the inferior turbinated bone and from the inferior meatus, and so formed a goodsized flap of mucous tissue and periosteum whose base was continuous with the mucous membrane lining the inner sept of the alveolus which formed one boundary of the cleft. This flap was then made to cover in the cleft, being connected by a continuous suture with the opposing freshened edge. There was no possibility at the time of bringing the edges of the soft palate together, so this portion of the operation was postponed till the hard palate had developed a little. Nothing could have been more satisfactory than the result which was obtained from this method. Mr. Lane pointed out that it admitted of a tolerably wide application, though he had seen very few cases like the above in which it was so peculiarly applicable, and which were apparently not capable of being treated by the ordinary methods.—*Med. Press and Circular*.

ARMY AND NAVY.

U. S. ARMY FROM AUGUST 6, 1893, TO AUGUST 12, 1893.

Leave of absence for twenty days, to take effect upon the conclusion of his examination for promotion, is granted first Lieutenant James D. Glennan, Assistant Surgeon, U. S. Army.

First Lieutenant Charles E. B. Flagg, Assistant Surgeon, will proceed to the Yosemite National Park, California, for duty with Troop 1, 4th Cavalry, relieving Capt. Leonard Wood, Assistant Surgeon.

Upon being thus relieved, Capt Wood will return to his station, the Presidio of San Francisco, California.

Leave of absence for one month, to take effect, about August 16, 1893, is granted Captain Henry S. T. Harris, Assistant Surgeon, Fort Keogh, Montana.

Leave of absence for one month, to commence about September 5, 1893 is hereby granted to Major J. F. Lauderdale, Surgeon, U. S. Army.

Leave of absence for three months, to take effect on or about September 4, 1893, is granted Major George W. Adair, Surgeon, U. S. Army.

Leave of absence, for one month, and fifteen days, to take effect, when his services can be spared, is granted first Lieutenant Frank R. Keefer, Assistant Surgeon.

By direction of the acting Secretary of War, the extension of leave of absence, on account of sickness, granted Captain Marlborough C. Wyeth, Assistant Surgeon, is still further extended two months on account of sickness.

Captain Marcus E. Taylor, Assistant Surgeon, having been found incapacitated for active service, by an Army Retiring Board,

will proceed to his home and report thence by letter to the Adjutant General of the Army.

Leave of absence for one month, is granted first Lieutenant Alfred E. Bradley, Assistant Surgeon, U. S. Army.

Leave of absence for one month, to take effect upon the return from detached service of first Lieutenant Henry C. Fisher, Assistant Surgeon, is granted Captain Eugene L. Swift, Assistant Surgeon.

NEWS AND MISCELLANY.

A "Fair" Companion.

If you intend visiting the World's Columbian Exposition it is of the utmost importance that you learn how to see it to the best advantage, so as not to waste time and money.

To go into the Fair grounds without the aid of a person or guide "who knew it all," or with the use of an ordinary guide book would be very much like seeing Chicago through the aid of the City Directory, or landing alone at one of its various depots. You would be utterly lost, and as for relying on other visitors to tell you what you should do or where you should go, please remember that very few will be better acquainted with their surroundings than you, and the hurly-burly will give no one time to attend to other people's wants or wishes.

The book is called A "Fair" Companion, and is intended to obviate the necessity of a person accompanying you, as the Companion has been made a study and contains much better information than you would be likely to receive from a uniformed guide, for the reason that he would show you what *he* thought was of most interest, while this book shows *it all* and leaves it for you to select what pleases your taste. If you have but one day to devote to seeing the Fair, it tells you what can be done in that time and a choice of three plans how to do it; if you have two days, the work is divided into that time—also a six-day plan. The Companion will also be a valuable aid to the fortunate ones who may prolong their stay for weeks or months, as it gives in concise and consecutive form information that will save days of laborious travel around the grounds in the endeavor to become familiar with the location of buildings and exhibits.

By this means you can work systematically, avoiding loss of time in rambling over the grounds in search of something—you hardly know what—and seeing everything at the most opportune time.

This book has a large map of the World's Fair grounds showing all the roadways, pathways, waterways, buildings, gates, etc.

With the aid of A "Fair" Companion you can see everything to the very best advantage.

Price: Paper cover, 30 cents per copy; Flexible cloth cover, \$1.00 per copy; Leather cover, \$1.50 per copy. THE THOMAS FOREIGN TOURIST CO., 1512 Chestnut Street, Philadelphia, Pa.